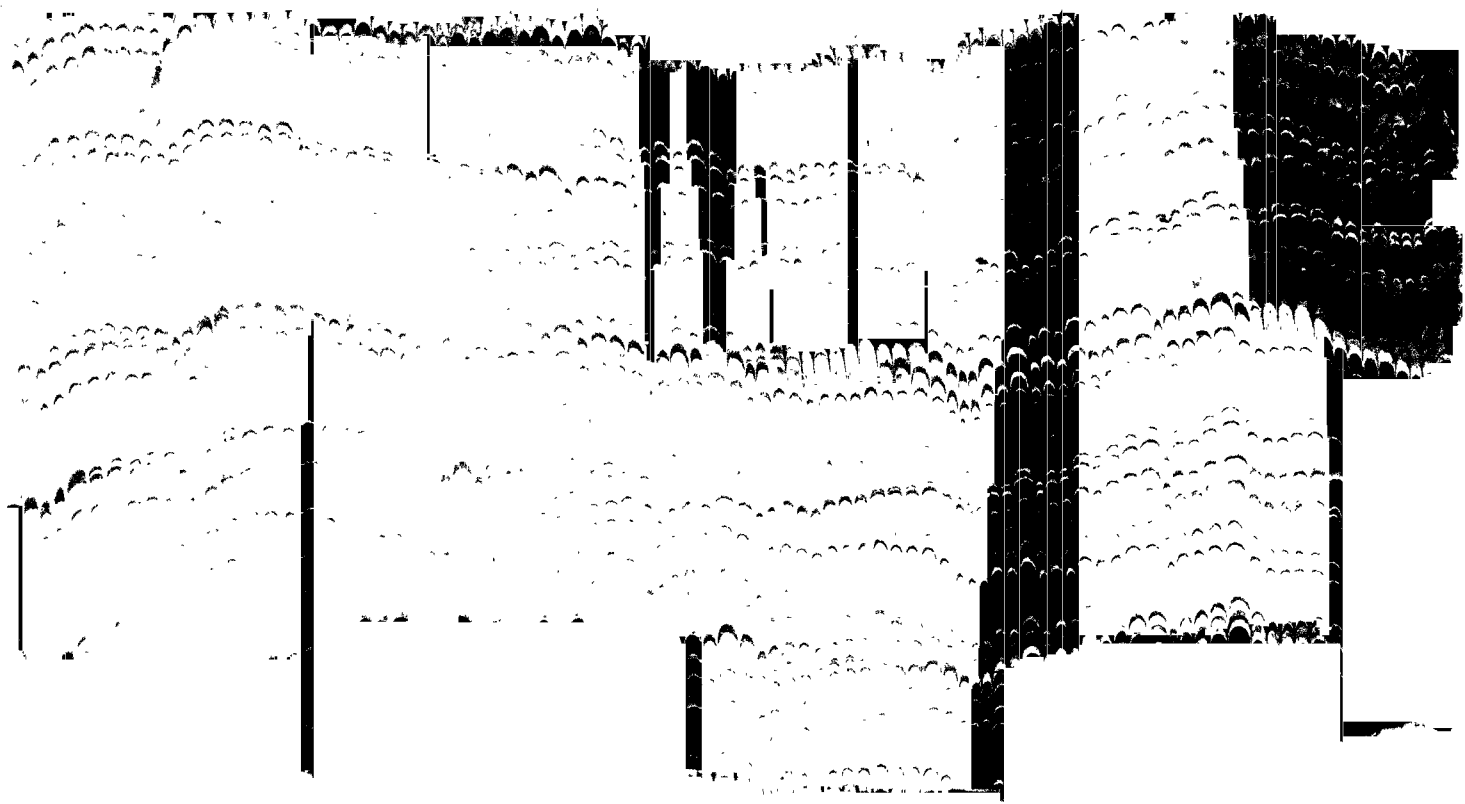


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VOL. VI.

JANUARY TO DECEMI

1837.

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nd them to the Asiatic Society at Calcutta; it will languish,
shall be long intermitted; and will die away, if they sha
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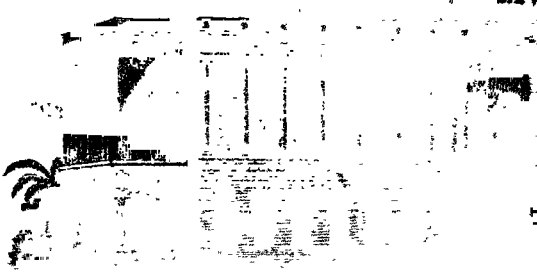
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CIRCULATED GRATIS TO MEMBERS OF THE SOCIETY.

No. 61.—*January*, 1837.

[Published on the 22nd Feb. 1837.]

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II.—Alphabets of the Tai language. By the Rev. N. Brown, Missionary in Assam,.....
III.—Remarks on the Silk Worms and Silks of Assam. By Mr. Thomas Hugon, Sub-Asst. Nowgong,.....
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II. Alphabets of the Tai language.
III. Specimen of the Khamtí writing.
IV. Specimen of the Ahom language, (this plate is unavoidably postponed, the manuscript having been accidentally mislaid.)
V. The Eria silkworm of Assam, Phalæna cynthea.
VI. The Moonga silkworm of ditto, Saturnia Assamensis.

PAPERS RECEIVED.

Horary observations at Dádupur for December.
Meteorological diary from Ambala.
Ditto from Cawnpore.
Ditto from Darjiling.
Ditto from the Mauritius.
Series of fossil shells from Cutch.
Further fossil bones from Perim.
Further illustrations of the Ornithology of Nipal, (Cutia.)
Journal of a voyage from Lodiana to Mithankot on the Sutlej.

NOTICE TO SUBSCRIBERS.

From the 1st January, 1837, we are compelled to raise our monthly charge the Journal to ONE RUPEE EIGHT ANNAS, to Subscribers, and TWO RUPEES single numbers. We have in the Preface to the last volume explained reasons which have obliged us, reluctantly, to impose this additional tax our supporters, in order to save us from a heavy personal sacrifice on the lication. On the other hand, we have promised an increase of matter, have ventured to anticipate a considerable diminution of the charge for posta We have also no intention of issuing any further Appendices this year, so the total yearly subscription will probably be less than that of former years.

Appendix III. is now in circulation—it was retained in hopes of age by other mode[illegible] transmission than the dâk.

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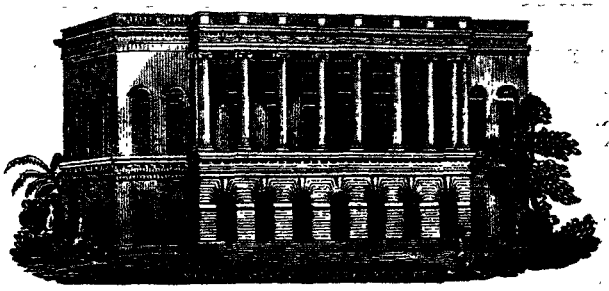
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IX. Lower jaw of the same fossil animal.

IX. (bis.) Fossil shells of the *Chári* range in *Cutch*.

PAPERS RECEIVED.

On a new genus of the Sylviadæ, with description of three new species.

Coins dug up at Montollee in Ceylon, and drawings of others collected on the island.

Catalogue of Nipálese Mammalia.

Sketch and description of a statue and inscription dug up in the Gorakhpur district.

Facsimiles of numerous inscriptions from Girnar.

Note on a new yellow dye.

ERRATA IN No. 26, (VOL. II.) OF THE JOURNAL.

Page 89, line 26, *for* "the first specimens," *read* "the finest."
,, 93, ,, 29, *read* "No. 17 Lymnæa,.... (mihi)—limosa?"
,, 523, ,, 3, *for* "knee," *read* "neck."

NOTICE TO SUBSCRIBERS.

Having received more than one reference from the Bombay Presidency on the mode of payment for the Journal, we beg to state that where parties have no Agents in Calcutta, their subscriptions may be handed to Messrs. Remington and Co. of Bombay, and those of Madras to Messrs. Binny and Co.

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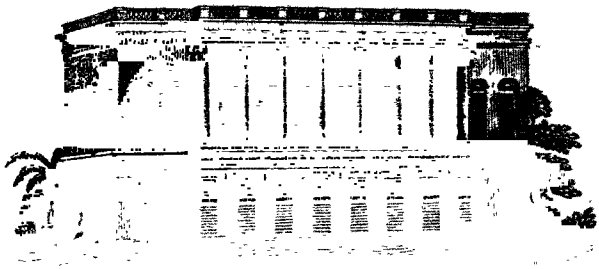
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Pl. IV. *Specimen of the Ahom Character.*

[This plate belongs to the January number. A second version of the Ahom alphabet has been subjoined somewhat more full than the one furnished by Mr. Brown. In expressing them in Roman characters, the letters *ga, gha, da, dha, ba, bha,* are so entered from their analogy to the Nágari alphabet, but it must be understood that they are to be pronounced as *k, t,* and *p,* and their aspirates respectively, *with the falling intonation;* the other *k, t,* and *p,* having the *rising* intonation. The sounds *g, d,* and *b,* do not exist in the language. The volume, whence the specimen is taken, has a translation in Bengáli, which we will insert hereafter.]

Pl. X. Inscription of Dipaldinna at Amarávatí.

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XVIII. Fossil bone brought up in the boring in Fort William; head of the Bos Gaurus (museum); and fossil quadrumanous tooth (to be described in the April number.)

PAPERS RECEIVED.

Facsimiles of various inscriptions from Khonlgiri in Cuttack.
Facsimile of an inscription from the fort of Kalinger.
On a new genus of Plantigrades.
Meteorological Register for March kept at Kathmandu.

NOTICE TO SUBSCRIBERS.

The Editor regrets much the irregularities complained of by Subscribers at Madras in the receipt of the work. He finds that the monthly copies have been dispatched as opportunities offered, although sometimes a delay of two months has occurred. In a short time, it is hoped that the work will be again circulable by dák all over India, which will prevent these vexatious interruptions.

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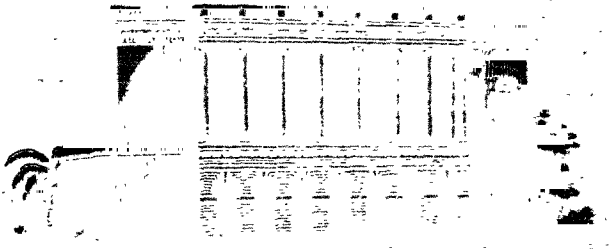
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I.—Abstract of the Journal of a Route travelled by Capt. S. F. Hannay, of the 40th Regiment Native Infantry, from the Capital of Ava to the Amber Mines of the Húkong valley on the South-east frontier of Assam. By Capt. R. Boileau Pemberton, 44th Regt. N. I. .....
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III.—Specimens of Hindu Coins descended from the Parthian type, and of the Ancient Coins of Ceylon. By James Prinsep, Sec. As. Soc. .....
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Pl. XIII. Alphabet of the Amarávatí character, p. 222.

PAPERS RECEIVED.

Examination of the Páli Buddhistical Annals.
Translation of the Chapter on Faith in the books of the Dádú-panthi sect.
On some new genera of Raptores, with remarks on the old genera—(second recital copy.)
Meteorological Register from Kathmandu, for April.
Translated extract from the Makhzan ul Adwiyah on the medical properties of Acacia Arabica.
On the Indian Boa, Python Tigris.
Further Inscriptions from Cuttack.
Inscriptions from Sanchee near Bhilsa.

NOTICE TO CONTRIBUTORS.

We have been forced to keep back several articles already set up in type for want of space, notwithstanding our increase to 80 pages. Should a press of matter thus continue, we shall be compelled, in justice to our contributors, to issue an extra number, and thus divide the year into two volumes, of 600 pages each; but under our engagement to subscribers at the beginning of the year we are reluctant to adopt this measure.

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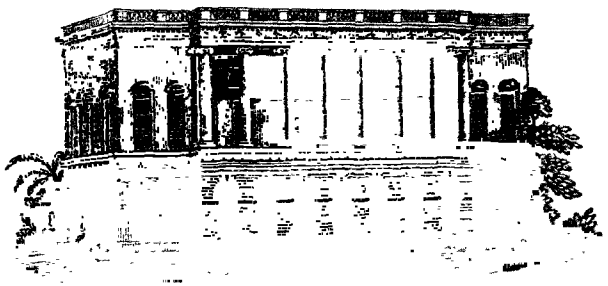
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[Since penning the note to Dr. Falconer and Capt. Cautley's paper on the fossil quadrumanous tooth, we have heard again from Dr. F. who accounts for the scratches observed on the large flat facet by explaining that he had himself rubbed the fossil on a hard substance to remove a portion of matrix, *part of which still adheres to this face*, and consequently disproves the supposition of its having been ground down artificially. This, added to the fact of its being brought in with many others direct from the fossil deposit, is quite sufficient to remove all scepticism on the subject, and to give full force to the authors' arguments.—Ed.]

COMMUNICATIONS RECEIVED.

Numerous facsimiles of Inscriptions from Gaya.
Legend of Vicramáditya in Gujerat.
Meteorological Register from Darjiling.
[For other papers see Proceedings As. Soc.]

NOTICE TO SUBSCRIBERS.

We beg to congratulate our supporters on the result of the Post Office Committee's labours. The scheme which has been published does not remove the burden of postage altogether—nor was it reasonable to expect so great a boon; but it enables the most distant subscriber to receive his periodical at the same cost as the 400-mile resident. And although by the post the charge for a No. of this Journal will be to such a party say 9 annas, this charge may be reduced to one-third where there are three subscribers at one station, by sending the three copies as a banghy parcel. Before the new rules come into operation (in September or October), we shall endeavour to make arrangements to profit by this provision: we request therefore that parties who prefer receiving their Journals by the post will intimate the same,—and that in cases where three or more would unite, we may be informed to whom the envelope should be addressed.

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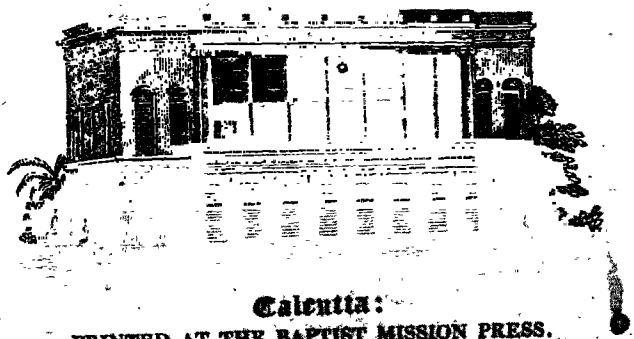
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XXVIII. View of the Sanchi Monument.
XXIX. Details of the Architecture of ditto.
XXX. Fossil fore-leg of an elephant from Jabalpur.

PAPERS RECEIVED.

Description of the city of Ujjain.

Continuation of translated extracts from the Dadupanthi Granthas.

Meteorological Registers from Darjiling and Nipal.

[We must apologise for again keeping back these journals, especially the latter, which were in the printer's hands, but could not be set up on account of the quantity of table work in another article.—Ed.]

Correspondence regarding Nipal Zoological publication.

Description of the Bibos or Gauri Gau of Nipal with continuation.

[For other papers, see Proceedings Asiatic Society.]

NOTICE TO SUBSCRIBERS.

We must crave some indulgence for the tardy appearance of the present number, which has proved somewhat troublesome to the printer! The six numbers for the past half-year contain 500 pages and 30 plates,—sufficient to form a volume; but we prefer continuing the paging, that a single index may embrace the whole year's contents, whether it be preferred to bind up the volume in two parts or otherwise, for which proper title pages will be prepared. We request attention to the memorandum on the third page of the cover.

ERRATA.

Page 348, line 6, after 'to this' insert 'day.'
" 350, " 44, *for* 2,3. 'Hunda' *read* 2. 'Hunda.'
" 377, " 3, from below *for* 'a' *read* 'an.'
" 384, " 9, from below *for* 'general' *read* 'generic.'
" 386, " 22, after written insert semicolon.
" 387, " 4, from below *for* سورت *read* صورت
" 392, " 4, *for* 'unexpected' *read* 'unsuspected.'
" 391, " 12, *for* 'Devanágri' *read* 'Devanágari.'

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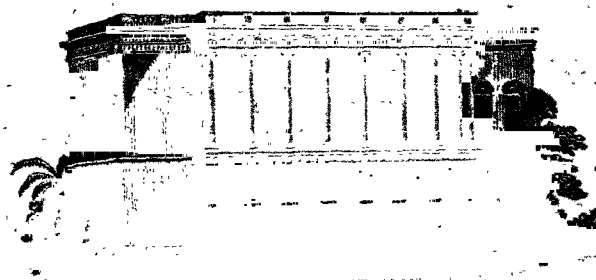
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CIRCULATED GRATIS TO MEMBERS OF THE SOCIETY.

No. 67.—July, 1837.

[Published on the 31st August, 1837.]

"The bounds of its investigation will be the geographical limits of Asia; and within these limits its inquiries will be extended to whatever is performed by man or produced by nature."
SIR WILLIAM JONES.



Calcutta:

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Notice of a pillar inscription at Delhi.
Continuation of the translation of Sidi Ali Capudan's navigation.
Meteorological Register from Darjiling.
Account and drawings of a fossil head from the Nerbudda.

NOTICE TO SUBSCRIBERS.

One half of the dák despatch of the June number of the Journal having been inadvertently hurried off without filling up the memorandum of account on the cover, the form is reprinted this month and Subscribers' accounts inserted up to the 30th June, 1837.

Any mistakes therein, or any inaccuracy of delivery will receive immediate attention.

JOURNAL

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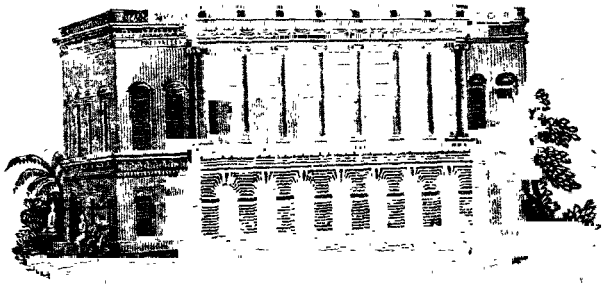
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[The number of inscription plates has obliged us to omit the sketch of *Testudo Geometrica*.]

PAPERS RECEIVED.

Note on proposed trip to Spiti.
Meteorological Registers from Nipal and Darjiling, August, (just too late for the present number.
Copy and translation of two servitude bonds.
Note on two names of birds in the Delhi lát inscription.
Register of the Tides at Chittagong for July.
Ditto at Calcutta and on the Coast.

[See Proceedings As. Soc. for other communications.]

ERRATA

in the July number.

The vowel mark *e* has been broken off under the press in a great many passages of the Sanskrit readings of the Delhi inscription, particularly in the word *mé*.

Page 581, *line* 7 *after* ' by,' *insert* ' the.'
,, 583, ,, 5 of notes, *for* ' nimitat' *read* ' nimitn.'
,, 584, ,, 12 ditto *dele* ' m' *after* ' esa.'
,, 585, ,, 9 ditto *for* ' junè' *read* ' janè.'
,, ——, ,, 20 ditto *for* ' participlelar' *read* ' participular.'
,, 594, ,, 25 ditto *for* ' adopting' *read* ' adapting.'
,, 595, ,, 12 ditto *for* ' nacshatras' *read* ' nacshatric.'
,, 603, ,, 11 ditto *for* ' dhara' *read* ' ádhára.'
,, 604, ,, 4 ditto *for* ' neat' *read* ' next.'
,, 608, ,, 6 ditto *for* ' you read ' thou.'
,, ——, ,, 19 ditto *for* ' Kahgur' *read* ' Kahgyur.'

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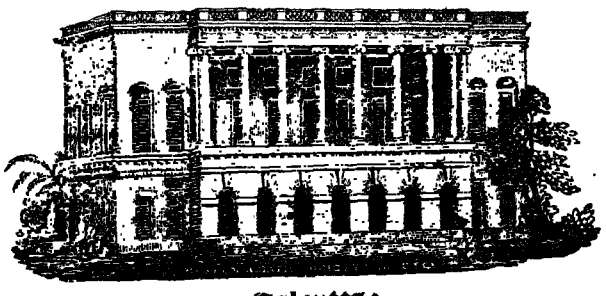
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Coins from Singapore.
Notice of the Rekha Ganita.
Continuation of Mauritius Meteorological Registers.
On the trisection of an angle.

NOTICE TO SUBSCRIBERS.

The new post-office regulations having now come into force, we are happy at being able to circulate from this date the *Bombay* and *Madras* Nos. to those presidencies by dák, without inflicting any inordinate tax upon our distant subscribers. The weight of our late numbers unfortunately exceeds 9 tolas the limit transmittable by dák on single rates; but we will endeavour by parcelling out our packets for each station within pamphlet bangy weight to send thus three numbers under one envelope and reduce the postage to each subscriber proportionally. We trust the party addressed will not think it too much trouble to act as distributor. By addressing each in turn the onus will be lightened and the account inter se simplified. Those who disapprove of the bangy conveyance are requested to give us their instructions accordingly.

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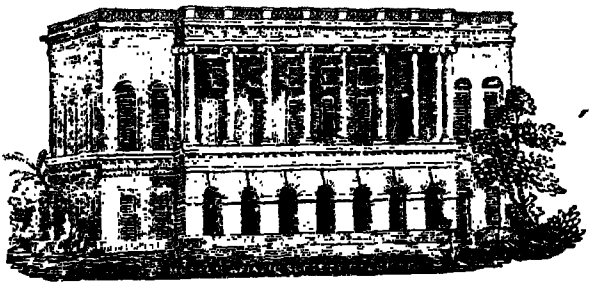
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II.—Observations upon the past and present condition of Oujein or Ujjayani. By Lieutenant Edward Conolly, 6th Light Cavalry, ...

III.—Account of the Tooth relic of Ceylon, supposed to be alluded to in the opening passage of the Feroz lat inscription. By the Hon'ble George Turnour. Esq. Ceylon Civil Service,.....

IV.—Facsimiles of ancient inscriptions, lithographed by James Prinsep, Sec. As. Soc. &c. &c. .....

V.—Meteorological Register kept at Darjíling for August, 1837, by Dr. H. Chapman, ...

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Roll of facsimiles from Allahabad.
Tide table for October at Chittagong.
Notice with specimens of the rocks of Bourbon.
Ditto from Egypt and Syria.
Transcript of the Delhi (Fraser) lát.

NOTICE TO CORRESPONDENTS.

We have been requested to publish an article on the trisection of an ang
jeant Ryan, of the third battalion of Artillery. It does him much
we regret to add that the solution is incomplete,—in fact except in tw
particular cases the fulfilment of the final conditions of the problem l
straight lines and circles exceeds the powers of elementary geometry.

A general solution of the problem with the aid of the equilateral hype
first example given by Hutton on the construction of cubic equations
vol. of his course of Mathematics.—ED.

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NOTICE TO SUBSCRIBERS.

The Editor regrets the trouble he must have caused his subscribers las
circulating the journals, three in an envelope to distant stations. He fi
culation that nothing is saved (or at least nothing to compensate the trou
mode of distribution ; whereas by keeping the weight of the journal with
it may be circulated to the most distant station by dâk at as many annas,
therefore he will follow this mode unless otherwise directed.

ERRATA.

Page 676 line 7 *for* ' this powerful,' *read* ' his powerful.'
,, — ,, 3 from below, *for* ' ayantaliyam,' *read* ' anantaliyam.'
,, 766 ,, 29 *for* ' 24° 13½,' *read* ' 24 miles : 13½.'
,, 779 ,, 2 and 5 *for* ' is,' *read* ' are.'
,, 791 ,, 8 *for* ' Chadaguttassa,' *read* ' Chandaguttassa.'
,, — ,, 17 *for* ' leaaes,' *read* ' leaves.'
,, 794 ,, 7 *after* ' quarter,' *insert full point.*
,, — ,, 3 from bottom, *for* ' very,' *read* ' verb.'
,, 795 ,, 30 *for* ' papey,' *read* ' paper.'
,, — last line, *for* वड *read* वट.

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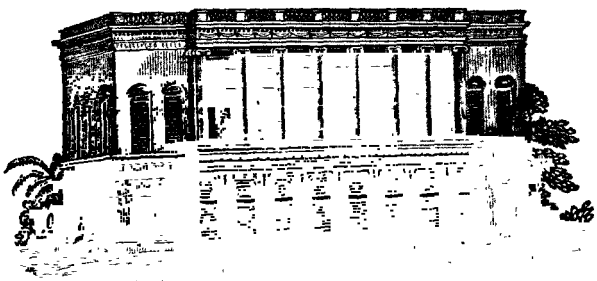
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LVI. Various fragments of ditto,..... 968

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PAPERS RECEIVED.

Analysis of some of the restored manuscripts of the Mackenzie collection.
[See also notices in the Proceedings of 6th December.]

NOTICE TO SUBSCRIBERS.

Some apology is perhaps due to many of our readers, for presenting them with so copious an admixture of Sanskrit in the present number, and especially for not adding a translation to what is inserted! We were unwilling to curtail the specimen of the Rekhá Ganita obligingly communicated by Mr. WILKINSON, and we intended fully to give a translation, but the arrival of the Allahabad facsimiles called our attention to a more interesting and absorbing task, and the end of the month drew nigh before we could revert to the Sanskrit Euclid!—We hope to regain our punctuality of publication by the end of the year.

ERRATA.

Page 876, line 1, *for* 'توفی یوم الثنان,' *read* 'توفي يوم الثلثا.'
and in the translation, line 14, *for* 'WAD,' *read* 'WALD,' (or WALR,) and *for* 'Monday,' *read* 'Tuesday.'

Errata, in the October Number.

Page 834, line 7, *for* 'वसारि,' *read* 'विसारि.'
,, ,, 13, *for* 'आयातरम्यं,' *read* 'आपातरम्यं.'
,, ,, 19, *for* 'विग्रोधि,' *read* 'विग्राधि.'

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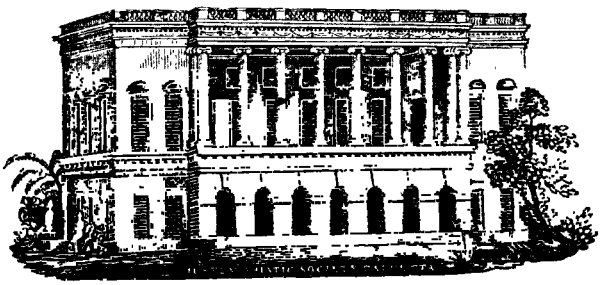
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PAPERS RECEIVED.

Notice of Balabhipura, and facsimiles of ancient numerals.

See the Proceedings Asiatic Society for the 6th January.

TO SUBSCRIBERS.

We beg to call attention to the statement of account published with the present number, and to request our subscribers to correct any errors which they may find therein.

STATEMENT OF ACCOUNT.

Balance of your Subscription to the Journal As. Soc. on the ..... }
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☞ A reference to Calcutta will be desirable; otherwise the amount may be paid to Messrs. Binny and Co. Madras, to Messrs. Remington and Co. at Madras, or to Messrs. W. H. Allen and Co. of London.

Where the pen is struck through the above, it denotes that there is a reference for regular payment in the Editor's hands.

Inscription on the BHITARI LATH *in the Ghazipur district.*

see Plate XXXIV for a version

Lt. A Cunningham del.

J. Prinsep lith.

Actual size of the sculptured letters.

JOURNAL

OF

THE ASIATIC SOCIETY.

No. 61.—*January*, 1837.

I.—*Restoration and Translation of the Inscription on the Bhitárí Lát, with critical and historical remarks. By the Rev.* W. H. MILL, *D. D., Principal of Bishop's College, Vice-President, &c. &c.*

The discovery in the *Ghazipur* district, of a pillar with an inscription bearing the same royal names and genealogy as No. 2 on that of *Allahabad*, and continuing the series downward by three or four generations from SAMUDRA-GUPTA, the principal subject of panegyric in both, might be expected to furnish valuable supplementary information on points which that monument left in obscurity. What was the seat and extent of the empire of this GUPTA dynasty, and what was the precise place which the acts and events there described bore in the general history of Northern India in the ages that followed the great eras of VICRAMÁDITYA and SÁLIVÁHANA,—are points on which we might hope to gain more light by a document of this length, than from any others which the progress of antiquarian discovery has yet produced.

The actual information obtained from this inscription, though not altogether destitute of new and interesting particulars relating to the state of India at the time of these kings, as I hope to shew in the few historical remarks subjoined to the reading and translation, is yet far from affording the desired satisfaction on the principal points just mentioned. Except the bare point of succession, and some adventures rather alluded to than related in verses of a somewhat obscure style of composition, the information of a directly historical nature extends little beyond what is obtained from the numismatic researches so ably and indefatigably conducted by our Secretary. Whether a more complete

transcript would much increase our information from this source, may also be doubted. Lieutenant CUNNINGHAM, to whose zeal and activity the inquirers into Indian antiquities are so deeply indebted, states that he made the transcript of this Bhitárí inscription under very serious disadvantages: but I am not disposed to attribute to any imperfections arising from this cause, the whole or even the greater part of the errors discoverable in the inscription as now exhibited. Some are certainly chargeable on the sculptor who formed the letters on the pillar, unfaithfully representing the remembered or written archetype before him: and these errors are of sufficient magnitude to induce the probable belief, that others occasioning more perplexity in the deciphering, may have arisen from the same source. From whatever source, however, they proceed, they are capable of being completely detected and amended in all the earlier part of the inscription: viz. the introduction, and the laudatory verses that follow; but when the verse suddenly ceases or changes, and that in the midst of the stanza, as it does about the middle of the 14th line on the pillar,—it is impossible to say how far errors of the same kind with those before found and corrected, (such as this sudden cessation itself seems to indicate) may have produced the general unintelligibility of the document until we come to its last line, the 19th. With the exception of those four lines and a half, the rest, notwithstanding the indistinctness of many of the letters (indicated by the frequent double readings and occasional lacunæ in Lieutenant CUNNINGHAM's pencil copy), and the more serious difficulty arising from the positive errors above mentioned, may be interpreted with sufficient confidence.

That I may not, however, seem to be gratuitously imputing error to an unknown artist more than twelve centuries dead, with a view to screen the want of skill or accuracy in his living transcribers and interpreters,—I am bound to make good the charge in question in detail, and in a manner that may bring conviction to the mind of every competent scholar. The substitution of ब for व in the word बनावसक्तैः (*cohibitis-affectibus-viri*) in the 6th line, is certainly the mistake of the graver, not of his copyist: as is also the equally evident substitution in the following line of the trisyllable पृथिवी *prithivi* for its synonyme पृथ्वी *prithví* (*the earth*); where the latter word of two long syllables is indispensably required by the measure of the verse, indicated as it is by all the preceding and subsequent words in a manner not to be mistaken. These words in their written forms in the ancient character, are too unlike what are severally substituted for them to make this the possible error of a European copyist unacquainted with Sanscrit,—while they are pre-

cisely such mistakes as a Hindu superficially acquainted with that language might most easily commit, if uninspected, in a work like this: the former arising from an ignorant confusion of two words of similar sound, but wholly different etymology as well as meaning,—the latter from total inattention to the rules of metrical harmony. Now the existence of two such glaring errors of the sculptor, uncorrected, renders it highly probable that we should impute to him a large proportion, if not the whole, of the seven following equally manifest errors, (which might in their own nature, the first especially, be as easily committed by the European tracer of a facsimile.)

1. We have in line 8, at the close of the first metrical stanza, one न instead of two in the words ननर्त्त *nanartta* required to close the verse in the *Mánini* measure

∪ ∪ ∪ ∪ ∪ — — — ∪ — ∪ — —

with no room whatever in the facsimile for the missing letter.

2. We have in the beginning of line 10, the syllables ह्वि with not the least space between them—though it is absolutely certain that a त ought to be there, no other syllable making a word with the syllables प्रणिहि preceding, viz. the word *pranihita* from the close of the 9th line.

3. Again in line 10, we have in the facsimile द्दे where the measure cannot possibly admit more than the latter of these two syllables, viz. the long दे in प्रदेश.

4. We have in line 12, the syllables ग्रुदिग्रिदिग्रि without the least interval in the facsimile between the first and second of them,—though the first is the penultimate of a connected and well defined stanza, and the four following are as evidently the beginning of another: the verse thus requiring, as does the sense independently of the verse, the syllable दं to close the former stanza with the word *suddham*.

5. We have in line 13, the syllables यः जि in close juxta-position, not only contrary to the rules of *sandhi*, which in verse are carefully observed, but the former appearing from the preceding syllables to be the penultimate of a *Mánini* line, while the latter appears equally from the following ones to be the *third* syllable of the next: so that there are absolutely required three syllables for which there is no space whatever in the facsimile; viz. either प्राचिपु which I have supplied, or something equivalent, to close one line of the stanza and begin the next.

6. There is no adequate space for the seven syllables required to be supplied at the beginning of the 14th line on the pillar to com-

mence the second line of the stanza there, though the continuance of the same measure is so clearly marked by what precedes and what immediately follows: and

7. What is still more strange, that measure closes with the second line of the stanza; what follows being as irreducible to metre as to good sense.

With these nine specimens of most evident error in as many lines of the inscription, the two last errors implying the skipping of several syllables at once,—and closed with the fact that there is no integral number of *Mánini* stanzas of four lines, but $5\frac{1}{2}$ only from their commencement in the 7th line of the pillar,—the grounds of conjectural emendation were too slight for its probable application, when the guide of metre was wanting. Accordingly from the 14th to the last line of the pillar, which supplied a stanza in the ordinary *Anustubh* measure, (a space constituting about one quarter of the inscription,) I have been content to groupe together those syllables which formed connected meanings, leaving the rest in which no such connexion appeared, uncopied: and abandoning, with respect to them, a task so much resembling that which the Chaldean king imposed on his magicians,—that of supplying the dream as well as the interpretation.

After this explanation, I proceed to exhibit the text, together with an English version of those three quarters of the inscription which are sufficiently intelligible, beginning with the seven lines of prose, that declare the genealogy and the succession.

Line of the Lát.

1. * परोर्व्विराजोद्वर्त्तुः पृथिव्यामप्रतिरथस्य चतुरुदधिसलि
2. [ल] खदितयागसिद्धि चंद्रवरुणेन्द्रान्तक [सेवा] * कृतद्रुम
राज्ञः युयज्ञसो ? नेकशो हिरण्यतटप्रदस्य दोराक्षन्नखमेरुवर्त्तु
3. र्म्महाराजश्रीगुप्तप्रपौत्रस्य * महाराजश्रीघटोत्कचपौत्रस्य
महाराजाधिराजश्रीचन्द्रगुप्तपुत्रस्य [लिच्छ] विदौहित्रस्य
4. महादेव्यां कुमार[देव्या] * मुत्पन्नस्य महाराजाधिराजश्री
समुद्रगुप्तस्य पुत्रस्तत्परिग्रहीतो महादेव्योत्पन्नदेव्यामु[त्पन्नो]
5. यदाप्रतिरथ * परमभागवतो महाराजाधिराजश्रीचन्द्रगुप्त
स्तस्य पुत्रस्तद्दानोद्यतो महादैन्यो ? भवद्दैवाप्सच्छः परम
6. * [भागव]तमहाराजाधिराजश्रीकुमारगुप्तस्य प्रथितमृदु
7. मतेर्यतावसक्तोः पूगयज्ञसः पृथिवीपतेरुत्तमश्री * [परि] गत
वनमरूर्वी

[रिपु]प्रजितयशाः पृथ्वीविपत्तीः सुतीर्य्य
[दि]शति नु कमलास्यो गुप्ततन्त्रैकवीरः।
8. प्रथितविमल-[कीर्त्तिर्नो]मतः स्कन्दगुप्तः
सदरितचरितात्मा यो ट भिन्दत्ते[न]नर्त्ते ॥
न विहतमनदात्मा तान्वधीदर्ग्गिकीर्त्तिं
9. रविनम-पलसाता विक्रमेण क्रमेण।
प्रतिदिशमभियोगो दीप्यते येन लक्ष्मो
ट नभिमतविजितात्मा प्रोद्यते सो ट परेन्द्रैः ॥
10. प्रणिहि-तव[सुनातः]संविधानप्रदेया
विचलितकुललक्ष्मीस्तद्धनायोद्यतेन।
क्षितितलनयनीया [ते]न नीतास्य सीमा
11. दुरय-चयमकार्षं वाक्यमित्थं गदित्वा ॥
क्षितिमचरणपीठ ट स्थापितो वामपादः
प्रसरमनुपमाद्रेा न्यस्तपृथ्वस्तः परेभे।
12. चिरमनुप[म]-सनाद्रेर्ट-पञ्चभिरुद्धं
चरितममलकीर्त्तेर्गीयते यस्य भु[ज्ज] ॥
दिशि दिशि परितस्थु[स्तं]कुमारं मनुष्याः
13. पितरि दिवमुपे[ते]-विप्रता[पा]मलक्ष्मीं।
भुजबलविजितारेर्थं पितृव्यादयः [प्राग्
रिपु]जितपरितोषेन्द्रांतरं साधनेभ्याः ॥
हतरिपुरिव कृष्णो देवकीं मन्यमा[न
14. -इदमतिदयया] रुक्मांशुरत्याप्रचित्तं ॥
विप्रकिरत्यदेहासुमद्भिनिं बिजेतुर्निजारेर्विच्छेपं कृत्वोदीर्य्यते
15. ह्यब्धदेवो विस्मितः प्रतिदिन * म - - - - - - -बद्धवीर्य्यस्य
16. सुमार्गदैत्यपराक्रमितुर्म्महावर्त्मकरस्य * शत्रुपशूरानन्यस्य
दुःश्रमिणः राजाद्भुतपरमारिरुद्धिप्रख्यापितो - - - - - - -
17. विश्रोचटपि शार्ङ्गध्वनि * - - - - - - - - - - हतस्य शार्ङ्गिणः
18. * सदार्चितस्कन्दरुद्र रत्नाकरार्कनेतुः महेशप्रीतगुप्तः - - - -
19. संततं सेवते मूर्त्तिमिमां यश्चात्र भूपतिः।
रुद्रेणार्हाद्यदग्रे स मतः प्रणयपण्यधोरः ॥ इति ॥

Translation.

Of the liberator of the greatest kings, incomparable on the earth,—by whom loads of forest timber are collected for the holocaustic service of INDRA, VARUNA and YAMA by the completion of sacrifices bearing the flavour of the waters of all the four circumambient oceans,—whose glory reaches to the firmament,—who on every side bestows liberally as the

golden-sided mountain (Meru),—by whom Meru himself might be borne aloft in the piercing talons of his mighty arm,—the great grandson of the great king GUPTA,—grandson of the great king GHATOTKACHA,—son of the great king, the sovereign of kings, CHANDRA-GUPTA,—maternal grandson of LIÇÇHAVI,—born of the great goddess-like CUMA'RA-DE'VÍ,—the great king, the sovereign of kings, SAMUDRA-GUPTA,—

Of him, when the accepted son was pronounced to be the son of DE'VÍ, daughter of MAHA'DAITYA, the incomparable worshipper of the supreme BHAGAVAT (CRISHNA), the great king, the sovereign of kings, CHANDRA-GUPTA,—then his son, before addicted to illiberality, and a man of great parsimony, was purified by the waters of destiny. Such was the excellent blessedness of the worshipper of the supreme BHAGAVAT, the great king, the sovereign of kings, CUMA'RA-GUPTA, celebrated for his mildness of disposition, and of subdued passions united to accumulated fame,—a blessedness pervading even the forests and desert lands.

Verse.

Having well surmounted the calamities that oppressed the earth, the chief and unique hero of the Gupta race, of face like a lotus, displays the glory of conquest: even he, by name SCANDA-GUPTA of distinguished and spotless renown,—who in the spirit of his own dreadful deeds danced in the fierce dance, (SIVA-like after his vengeance for SITA's death.)

Possessed of a clear insight into the profound wisdom of the Tantras, with a spirit of unceasing silence (on their incommunicable mysteries—and in accordance with their precept and discipline) mangling the flesh of the refractory in successive victories;—he by whom their challenge to battle being accepted and answered, forms a splendid spectacle in every quarter of the earth,—is declared even by alien princes to be one whose mind could not be shaken by sudden and unexpected calamity.

For afterwards by him to whom the keeping of his treasure was committed,—the boundary which was given as a sacred deposit, and worthy to be extended to the extremities of the earth—was treacherously taken away, and the prosperity of the family removed from it,—(even by him the minister aforesaid) coveting the wealth of that family, having previously professed much attachment in words, but destitute of the light (of truth), and followed by calamitous defection.

Yet (having conquered) the land, his left foot was fixed there on a throne yet untrodden by mortals, and having obtained excellent room, and laid by his weapons, he reposed from war on his (inaccessible) mountain. His pure and noble exploits, the exploits of a man of unspotted fame, although long opposed by the kings of the excellent seven hills, are now sung even by them.

In every region did men surround that young prince, when his father had gone to heaven, as one who had attained most illustrious prosperity: whom his father's brother and the other chiefs did first (thus surround, hailing him) as their new sovereign, in the midst of the joy of conquest, with tears in their eyes.

May he who is like CRISHNA still obeying his mother DE'VAKÍ, after his foes are vanquished, he of golden rays, with mercy protect this my design.

— — — — — —
— — — — — —
— — — — — —

Whatever prince in this place perpetually worships this sacred image, is considered by RUDRA (SIVA) himself as one whose understanding is ennobled and rendered praise-worthy by this affectionate devotion, even in the land of ARHA (INDRA) and the other celestials.

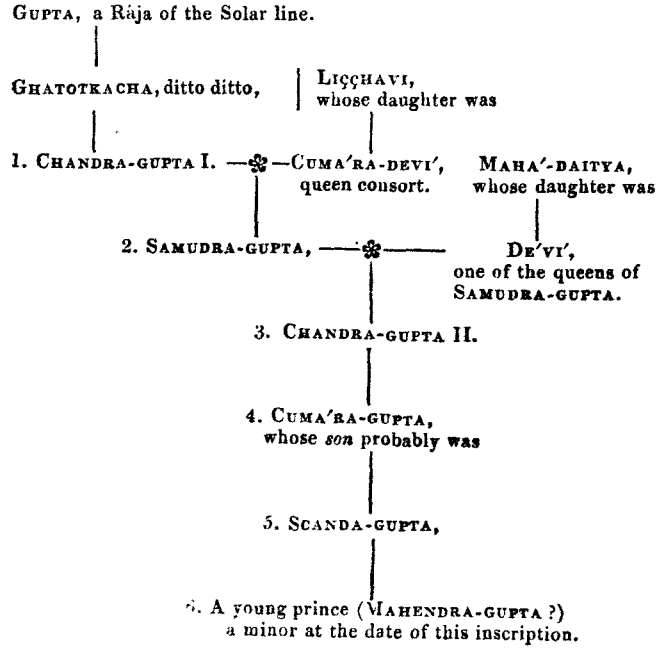
Remarks on the above Inscription.

The parentage of SAMUDRA-GUPTA son of CHANDRA-GUPTA, which closed the *Allahabad* inscription, forms in nearly the same words the beginning of the present; and his panegyric which pervaded the earlier monument, is the leading subject in the prose part of this. The first new fact is the designation of his son and successor, CHANDRA-GUPTA the second: whom it seemed most obvious on the first reading of the names* to identify with the expected son and heir of the 18th line of the pillar of *Allahabad*, the offspring of SAMUDRA-GUPTA and his principal queen the daughter of the proud princess SANHÁRICÁ. This identification, however, is removed by the terms of the inscription itself: this son does not succeed by right of primogeniture, but as peculiarly selected (*parigrihita*) on account of his eminent virtues from the rest of the family or families of the polygamist king, and is the offspring not of SANHÁRICÁ's daughter, but of the daughter of a prince named MAHÁDAITYA. The son and successor of CHANDRA-GUPTA II. is CUMÁRA-GUPTA, who is represented as having been a very unprincely character at the time of his father's adoption as heir to the throne; but having been disciplined by some unnamed fortune, becomes on his own accession to the throne, an emulator of the mild virtues and the *Vaishnava* devotion of his parent. The next king is SCANDA-GUPTA, who may be most probably supposed to be the son of his immediate predecessor CUMÁRA-GUPTA: but on this point, the verse which here takes the place of the more narrative prose, is unfortunately silent. We only hear of his distinguished fame as a warrior: and that his piety, congenial with his acts, does not take the same turn with that of his two nearest predecessors, of devotion to VISHNU the Preserver, but attached itself to the opposite system now so prevalent in this part of India, the deep, mysterious and sanguinary system of the Tantras. After the conquest and slaughter of many opposing kings, we hear

* See p. 644 of volume V.

of his eventual triumph over a more formidable enemy than all, a treacherous minister, who for a time succeeds in dispossessing him of his kingdom. After vanquishing, however, the rival monarchs of the seven hills, and resting peacefully on his laurels in his inaccessible mountain throne, (localities which carry us away from the immediate vicinity of the Ganges, but whether towards the north or Central India we have no means of determining,) this worthy worshipper of SIVA and DURGÁ ascends to heaven: and his brother and the other chiefs, with mingled feelings of grief and affectionate allegiance, proclaim his young child the heir to his father's crown and conquests. This youth is described as obedient to the queen dowager his mother, as was CRISHNA to his mother DE'VAKI'; but the part of the inscription that proceeds to speak of him is confused and unintelligible; neither does he appear to be once named; unless we conceive some letters of line 18 to give his name thus: MAHESA-PRITA-GUPTA, (*the Gupta attached to Siva, or beloved by Siva.*) He is probably the MAHENDRA-GUPTA whose name occurs in several of the newly discovered coins of this dynasty.

The royal family of the Guptas, therefore, as adapted to the time of this inscription, stands as follows; the Arabic numerals denoting sovereigns, or those to whom the prefix *Maharája Adhirája* belongs, in the order of their succession.



One remarkable fact, learnt solely from this inscription, is the prevalence at the time of the Gupta dynasty, of the two opposite sectarian forms of later Hindu worship: that of the exclusive devotees of VISHNU on the one hand, whose favorite authority is the celebrated poem (probably inserted among the Puránas by the comparatively recent grammarian VOPEDEVA) called the *Srímad Bhágavata:* and that of the worshippers of SIVA and his female energies on the other, whose text books are those singular compounds of Cabalistic mystery, licentiousness and blood, the Agamas or Tantras.—The princes CHANDRA-GUPTA and CUMA'RA-GUPTA are expressly commemorated as belonging to the former class, and SCANDA-GUPTA as an adherent of the latter. And here I must recall an observation that I hazarded when commenting on the *Allahabad* inscription, (J. A. S. vol. iii. p. 268,) that the worship of the Saktis, with its existing mysteries and orgies, was most probably unknown in India at the date of that monument. The terms in which that species of devotion is spoken of about a century after, in the second* of the metrical stanzas in the present *Bhitárí* inscription, shews that the same system was even then dominant, and sufficiently powerful and seducing to enlist kings among its votaries. And while this (if I am correct in supposing the age of the Gupta dynasty to be somewhere between the 1st and 9th centuries of our era), may be among the earliest authentic notices of that mode of worshipping BHAIRAVA and CÁLI',—the mention of it at all furnishes an additional proof to my mind of the impossibility† of referring these monuments to the earlier age of CHANDRA-GUPTA MAURYA, or that of ALEXANDER the Great, and the century immediately following.

A far more plausible hypothesis is the identification of this Gupta dynasty, with that which is mentioned in the prophetico-historical part of the Vishnu-Purána, (Book iv. chap. 24,) as arising in this precise tract of country, contemporaneously with other dynasties in different parts of India, during the turbulent period that followed the extinction of the last race of Indian sovereigns that reigned in *Magadha*, and the irruption of Sacæ and other foreign tribes from the north-west. The dominion of the Guptas is there said to include the great city of *Prayága* on the confluence of the Ganges and Jumna, where their principal monument is now found, as well as the yet more sacred city of *Mathurá* on the latter river, and the less known names of *Padmávatí* and *Kánti-purí*, (probably near the site of our present *Cawnpore*:) it is also described as extending down the Ganges to

* See Note A. † See Note B.

Magadha or *Behar*, where one VISVA-SPHATIKA (or VISVA-SPHURJI, of the old race of *Magadha* sovereigns) had extirpated the existing race of Xattriyas, and set up other low castes, together with Bráhmans, in their stead; as I read in two MSS. copies* of the Vishnu-Puráṇa, the words of which are

मागध्यां तु विश्वस्फाटिकसंज्ञो ऽ न्यान्वर्णान्करिष्यति कैवर्त्तयदु पुलिन्द ब्राह्मणान् राज्ये स्थापयिष्यति। उत्साद्याखिलक्षत्रजातीर्नवनागाः पद्मावत्यां कान्तिपुर्य्यां मथुरायामनुगंगा प्रयागं मगधा गुप्ताश्च मागध्यान् भोक्ष्यन्ति।

"In the country of *Magadha*, one named VISVA-SPHATIKA shall form and set up in the kingdom other castes, the Kaivarttas, Yadus, Pulindas, and Bráhmans: and thus having abolished all the races of Xattriyas, shall the nine Nagas, and in *Padmávatí*, *Kánti-purí*, *Mathurá*, and on the Ganges from *Prayága*, shall the *Magadhas* and the *Guptas* rule over the people belonging to *Magadha*."

All these new sets of kings, with the *Naishadhas* in *Calinga*, &c. and the more barbarous races elsewhere, are represented in the Puráṇa as ferocious, rapacious and tyrannical men, of little knowledge and no principle, whose rise and progress and fall are to be equally sudden and extraordinary, short-lived, and only nominal observers of religion. The people under their sway, and through the contact of foreign races, will gradually fall into that neglect of caste and other religious observances, that reference of all things to worldly riches and consequent impiety and unrighteousness, that will prepare the way for the tenth and last incarnation of VISHNU as KALKI' to restore all things. Thus, soon after the account of their Guptas, close the prophetic announcements of PARÁSARA to MAITREYA of what was to befal the world after him, and with them the 4th Book of the Vishnu-Puráṇa.

It is true, that according to the chronology of the Puráṇa, as set down minutely in that chapter, we should have the commence-

* The valuable English abstract and partial translation of this Puráṇa (as of the others) deposited in the Asiatic Society's Library by Professor H. H. WILSON,—is silent on the latter point, the association of the *Guptas* with *Magadhas*, and their dominion in *Behar*: relating their possession of those four cities in the Doáb, *Padmávatí*, *Kánti-purí*. *Mathurá*, and *Prayága*, as altogether unconnected with the affairs of *Magadha*, and the extirpation of the Xattriyas from that country, with which they are distinctly blended in the Sanscrit passage as given above.

For the further testimony of the *Srímad-Bhágavata*, see Note C.

ment of the reign of these Guptas posterior to SANDRACOTTAS, and consequently to ALEXANDER the Great, by (137 + 112 + 45 + 456 + 1399 + 300 + 186 =) 2635 years,—and therefore as really future to us as to the prophetic Muni and his hearer. But setting aside all other considerations, it is only the four first of the seven component periods of this sum that will appear to an attentive inspection of the Purána itself, to be entitled to the least attention: viz. the spaces assigned respectively to the Maurya, the Sanga, the Kanva and Andhra dynasties of Hindu sovereigns in *Magadha*: of which the name of each individual king is set down, their several numbers 10, 10, 4 and 30 agreeing perfectly with the durations assigned to each race*. But the fifth and sixth periods of 1399 and 300 years have no such catalogues of kings accompanying them, but only a statement that in the former there should rule in succession seven kings of the Abbhra caste, 10 Gardabhiras, 16 Saka or Scythian kings, 8 Yavana or Grecian, 14 Tushára, 13 Munda, and 11 Mauna kings: and in the latter period of three centuries, Paura and 11 other unnamed sovereigns. This enumeration, strongly indicative of the disturbed and semi-barbarous condition of affairs, which caused the suspension of all the ancient records,—and in which synchronous dynasties might easily be mis-stated as successive ones, and the sum of years readily palmed on the Hindu reader, to enhance the antiquity of the classical and heroic ages of the country,—is succeeded, in the last period immediately preceding the rise of the Guptas, by something more resembling the records of earlier times. As this list, occupying the seventh period above mentioned of 186 years, has not yet been published,—(that of HAMILTON in the corresponding period being somewhat different and much more confused,) I will here set it down from my MS. of the Vishnu-Purána.

* These may all be seen, as they stand in this and other Puránas, in p. 100 of Mr. J. PRINSEP's Useful Tables. The accuracy of these lists is strongly confirmed by the collateral testimony of the Chinese travellers in India in the 5th century, whose relation is published in the London Asiatic Journal of July last. Their king of *Kapila*, YUE-GAE, *Beloved of the Moon*, whose ambassador sent presents to China A. D. 428, is (not CHANDRA'NANDA, as the learned translator of that work suspected, but) CHANDRA-SRI', the king immediately preceding PULOMARCHIS, the last of the Andhra dynasty at *Magadha*,—who was reigning at this precise time. This removes the hope entertained by Mr. J. PRINSEP, (to whom I am indebted for the communication of this paper) and myself, that this might prove to be the CHANDRA-GUPTA of the inscription, and makes the latter posterior to him by probably three or four centuries.

VINDHYA-SACTI from Kilakila, who adopts the manners of the Yavanas, whose son is

PURANJAYA,

RA'MA-CHANDRA,

DHARMA.

VANGARA, (Wils. VAR'ANGA.)

KRITANANDANA, (who has 4 sons.)

SUKHINANDI, who has 13 sons. NANDIYASAS, SISUHA, PRAVIRA.

After whom came 4 Bahukas or Bactrians, 3 Puspamitras, 13 Yadumitras, 7 Mekalas; and in *Kausala* or *Oude*, 9 Naishadhas.

Thus the account of this dynasty, which HAMILTON calls the Bahlic or Bactrian one, terminates in a confusion worse confounded than that from which it emerged. And this statement in the Vishnu-Purána is immediately followed by the passage above quoted respecting the Magadhas and Guptas.

Allowing, however, the least possible duration to the confused periods that followed the subversion of the Andhra dynasty in the middle of the fifth century after Christ, it is scarcely possible to fix the subjects of our present inquiry, the Guptas, higher than the age of CHARLEMAGNE in Europe, if we suppose them identical with the Guptas of the Purána.

NOTE A.

The insertion among the praises of the 5th king SCANDA-GUPTA, of the epithet "a mangler of the flesh of the refractory," *(avinama-palasátá,)* and that in close juxta-position with the attributes of peculiar wisdom, and adherence to a mysterious system of Cabalistic theology,—may appear surprising to persons who have either considered but slightly the genius and tendencies of idolatry, or are unacquainted with this peculiar form of it. To shew how perfectly natural is the juxta-position in the present instance, I cannot give a more generally intelligible proof than in the picture drawn in the metaphysical drama *Prabodha-chandra-udaya*, of a votary of this same Tantric discipline, under the name of SA-UMA-SIDDHÁNTA,—i. e. says the

commentator, a professor of the science of SIVA BHAIRAVA in conjunction with UMA his consort.—I will give the original Sanscrit and Pracrit (the latter spoken by the Buddhist, being his own Pálí,—the former by the other two speakers) with a different version from that of Dr. TAYLOR, distinguishing prose and verse exactly as in the original: premising, that the ingenious author does not intend to give any exaggeration or caricature, but simply to exhibit a model of an existing mode of belief and practice in his time: such as may be traced also, under certain modifications even now; after centuries of Mahomedan and Christian rule have interfered with the free exercise of such homicidal worship.

ततः प्रविशति सोमसिद्धान्तः कापालिकरूपधारी खड्गहस्तः

[परिक्रम्य] नरास्थिमालाकृतचारुभूषणः
श्मशानवासी नृकपालभाजनः।
पश्यामि योगाञ्जनशुद्धदर्शनो
जगन्मिथोभिन्नमभिन्नमीश्वरात्॥

क्षपणकः। एसो कावालिअवदं पुलिसो धारेदि ताणं पुच्छिस्सं [उपसृत्य] अले कावालिअ गलहडुमुण्डमालिअ केलिसे तुए सोखमोक्खे।

कापालिकः। अरे क्षपणक धर्म्मं तावदस्माकमवधारय।

मस्तिष्काक्तवसाभिघारितमहामांसाङ्तीर्जुकृतां
वक्त्रैर्ब्रह्मकपालकल्पितसुरापानेन नः पारणा।
सद्यः क्षत्तकठोरकण्ठविगलत्कीलालधारोल्वणै
रर्च्चा नः पुरुषोपहारबलिभिर्देवो महान् भैरवः॥

भिक्षुः। [कर्णौ पिधाय] बुद्ध बुद्ध अहो दारुणा ब्रह्मचर्य्या।

क्षप। अलिअन्त अलिअन्त अहो घोरपावकालिना केनावि विप्पलद्धा एसो बलाओ।

कापा। [सक्रोधं] आः पाप पाषण्डापसद मुण्डितमुण्ड चण्डालवेष केरो क्षुद्रक अरे विप्रलम्भक स किल चतुर्दशभुवनोत्पत्तिस्थितिप्रलय प्रवर्त्तयिता वेदान्तसिद्धान्तप्रसिद्धविभवो भगवान् भवानीपतिः। दर्शयामस्तर्हि धर्म्मस्यास्य महिमानं।

हरिहरसुरज्येष्ठश्रेष्ठान् सुरानहमाक्षये
वियति चरतां नक्षत्राणां रुणध्मि गतीरपि।
सनगनगरीमम्भःपूर्णां विधाय महीमिमां
कलय सकलं भूयस्तोयं क्षणेन पिबामि तत्॥

च्चप। अल कावालिअ अदोज्जव भणामि केणावि इन्दजालिना अलीअं इन्दजालं दिण्णिज्ज विण्णलब्धो सित्ति।

कापा। आः पाप पुनरपि महेश्वर ऐन्द्रजालिक इत्याक्षिपसि तन्न मर्षणीयं ते दौरात्म्यं। तदहमस्य

एतत्करालकरबालनिकृत्तकण्ठ
नालोच्छलद्रुधिरबुद्बुदफेनिलौघैः।
दत्त्वा बलिं डमरुडंकृतिहृतभूत
वर्गाय भर्गगृहिणीं रुधिरैर्धिनोमि॥

[इति खड्गमुद्यच्छति।]

IN ACT III.

To them, *enter* SOMA-SIDDHANTA *in the guise of a Kápálika* (*or man of skulls*), *with a sword in his hand.*

Soma-Sid. (*walking about.*)

With goodly necklace deck'd of bones of men,
Haunting the tombs, from cups of human skull
Eating and quaffing,—ever I behold
With eyes that Meditation's salve hath clear'd,
The world of diverse jarring elements
Composed, but still all one with the Supreme.

Buddhist. This man professes the rule of a Kápálika. I will ask him what it is.—(*Going up to him.*) O, ho! you with the bone and skull necklace, what are your notions of happiness and salvation?

Soma-Sid. Wretch of a Buddhist! Well; hear what is our religion.

With flesh of men, with brain and fat well smear'd,
We make our grim burnt-offering,—break our fast
From cups of holy Bráhman's skull,—and ever
With gurgling drops of blood that plenteous stream
From hard throats quickly cut, by us is worshipped
With human offerings meet, our God, dread BHAIRAVA.

Bráhman Mendicant, (*stopping his ears.*) Buddhist, Buddhist, what think you of this? O horrible discipline!

Buddhist. Sacred Arhata! some awful sinner has surely deceived that man.

Soma-Siddhanta (*in a rage*). Aha!—sinner that thou art,—vilest of heretics, with thy shaven crown, drest like the lowest outcasts, uncombed one, away with thee! Is not the blessed husband of BHAVANI the sole cause of the creation, preservation, and destruction of the fourteen worlds, and his power established by the fullest demonstration of the Védant? Let us yet shew even you the magnificence of this religion.

I call at will the best of gods, great HARI,
And HARA's self and BRAHMA,—I restrain
With my sole voice the course of stars that wander
In heaven's bright vault; the earth with all its load
Of mountains, fields and cities, I at will

Reduce once more to water—and behold
I drink it up.

Buddhist. Alas! poor Kápálika, this is just what I said. You have been deceived by some juggler, spreading out false images before you.

Soma-Siddhanta. What, again, thou sinner! Dost thou dare to call the great MAHESVARA a juggler? This thy malignity must not be forgiven. Lo, therefore,

With foaming floods of gore that gush amain
From throat well severed with this sabre's edge,
I make my sacrifice to him that calls
With beat of drum the hosts of creatures after him,
Dread SIVA—and with these rich ruddy streams
Delight his consort well, BHAVANI.

(*Draws his sword.*)

[How the hand of the Tantric zealot is arrested from smiting the unfortunate Buddhist,—how he then enters on a psychological defence of his opinions,—how he is then joined by SRADDHA' (or Faith!) in the character of a *Kapalini*, who by her blandishments leads both the Bráhman mendicant and the Buddhist, to deport themselves like Tantrists,—and how they all then join SOMA-SIDDHANTA in a *meditative* dance;—all this and other wonders may be found by the curious in the drama above cited.]

NOTE B.

In once more expressing the opinion, that the Gupta dynasty of our present monuments is posterior to the Christian era, I am by no means insensible to the new light that Mr. TURNOUR has thrown on the history of SANDRACOTTUS in the extracts he has given from a learned commentary on the *Mahá-wanso*, pp. lxxi—lxxxii. of his very interesting preface to that great historical work. That *some* of my objections to the identity of the two CHANDRA-GUPTAS are removed, or at least greatly weakened, I freely admit: there certainly appears ancient Buddhist authority (for such is apparently the *Atta-kathá* or *Astata-kathá* of the Uttara-vihára priests alleged by the commentator) for making the Mauryas a branch of the Solar race; utterly inadmissible as is the etymology assigned for that name in the *Tiká* (p. lxxvi.) as well as for the name of SISUNÁGA, ancestor of the Nandas, (pp. lxxii. lxxiii.) It is also very remarkable, in relation to this subject, that the latter prince is there represented as the son of a LIÇÇHAVI Rája, that being apparently the name of a distinguished family in *Magadha*: LIÇÇHAVI being also the name, in the inscriptions of *Allahabad* and *Bhitárí*, of the father-in-law of our CHANDRA-GUPTA I. and maternal grand-father of SAMUDRA-GUPTA. Nevertheless, there still appear to me insurmountable objections to identifying SAMUDRA-GUPTA with VINDU-SÁRA, the son and successor of CHANDRA-GUPTA MAURYA on the *Magadha* throne. while a still more evident impossibility is now added of identifying his son, the *Vaishnava* CHANDRA-GUPTA II. of our present monument, with ASOCA, son of VINDUSÁRA, the zealous ad-

herent and propagator of Buddhism, not only in his own dominions of *Magadha*, but the north, east, and south, as far as *Ceylon*. It is needless to pursue the discrepancy of the genealogies further: the *Vaishnava* CUMÁRA-GUPTA and the *Saivya* and *Saktya* worshipper, SCANDA-GUPTA, have nothing in common with the Buddhist descendants and successors of DHARMÁSOCA. Is it not also very possible that with a view to exalt the immediate ancestry of that most revered prince, the priests of the favored religion may have introduced this account of the *Moriya* family, as an offspring of the Solar race,—so discrepant from that which other Indian accounts, as well as Greek and Roman, give of its origin? That the Buddhist priests, notwithstanding their hostility to caste, are not insensible to considerations of this kind, is evident from the care with which, in the *Mahá-wanso* and elsewhere, they inculcate the undoubted royal descent of GAUTAMA BUDDHA.

NOTE C.

The passage above quoted from the Vishnu-Purána seems to have been somewhat differently read by the more modern author of the *Srímad-Bhágavata*,—who here as elsewhere, is apparently only transferring into his own more polished and elaborate verse, the records found in the older Puránic legends. By him the term Gupta, instead of being a proper name, is made an epithet of the *earth* as ruled or *protected* (for so the scholiast SRIDHARA has explained it) by the VISVA-SPHATIKA above mentioned, who is here called VISVA-SPHURJI. The close agreement, as well as occasional discrepancy, of the two authorities, will be easily seen from the following extract *(Bhágavata*, Book xii. chap. 1.)

मागधानां च भविता विश्वस्फूर्जिः पुरंजयः
करिष्यत्यपरान् वर्णान् पुलिन्दयदुमद्रकान् ॥ २० ॥
प्रजाश्चाब्रह्मभूयिष्ठाः स्थापयिष्यति दुर्मतिः ।
वीर्यवान् क्षत्रमुत्सार्य पद्मावत्यां स वै पुरि ।
अनुगंगामाप्रयागं गुप्तां भोक्ष्यति मेदिनीं ॥ २१ ॥

"VISVA-SPHURJI, another PURANJAYA, (i. e. says the scholiast, the best of the descendants of PURANJAYA or RIPUNJAYA, who was king of *Magadha*, B. C. 900,) shall create new barbarian castes, the *Pulindas*, *Yadus* and *Madras*. This ill-minded warrior shall make the greatest part of his subjects to be un-bráhmanical, (or lower than sudras)—and having exterminated the Xattriyas, he shall, in the city of *Padmávatí*, and on the Ganges, as far as *Prayága*, derive tribute from the *protected* earth."

The words अनुगंगामाप्रयागं are explained here by the scholiast to describe the situation of the king's metropolis *Padmávati*, as being situated in the Ganges *above Prayága*, or, as he words it, between *Allahabad* and *Haridvár*. But this explanation is quite inapplicable to the same words as they stand in the Vishnu-Purána, where they immediately follow the mention of *Mathurá*, and where the mention of *Magadha* following induces me to interpret the words "on the Ganges *below Prayága*" or between *Allahabad* and the sea.

II.—*Alphabets of the Tai language. By the Rev.* N. Brown, *Missionary in Assam.*

[We are indebted to Capt. F. Jenkins, Political Agent in *Assam*, for kindly engaging Mr. Brown to throw light upon the *Ahom* and *Khamtí* alphabets, of which it may be remembered Capt. Jenkins two years ago presented to the Society some manuscript volumes then undecipherable for the want of this indispensable key. The *Ahom* letters are stated to be copied from an old book in the author's possession. The brief notice of the language itself, (Mr. Brown writes to Capt. J.) was gathered from a pandit of the *Jorhath* Rája, whom he employed as teacher for a few months. He did not seem to possess a very perfect knowledge of the *Ahom* language, and he stated that the same was true of the *Ahoms* in general, who for the most part have lost all knowledge of their original tongue.

Captain Jenkins thinks there can be little doubt that the *Ahom* rájas came into *Assam* from the eastward about the beginning of the thirteenth century; and that the immediate cause of their emigration is to be sought for in the breaking up of the Chinese empire by the Moguls,—for at the epoch when Chukapha had fixed himself in *Assam*, Kublai Khan had just established himself in *China*. We may confidently hope that after a little longer residence at *Sadiyá*, Mr. Brown, who is rapidly extending his acquaintance with the different branches of the *Shyán* language will be induced to favor us with a sketch of the contents of the old *Ahom* chronicles, which, we are given to understand, certainly exist in *Assam*, and of which the volume transmitted by Capt. Jenkins may be a portion.

Capt. Jenkins alludes to a curious fact, communicated by Mr. Brown, which should be a further inducement to examine their books; namely, that no trace of Buddhism is to be found in the religion of the *Ahoms*. This is a remarkable deviation from the circumstances

of the other *Shyán* families whose literature is but a direct translation of Burmese Buddhism, as their alphabets, the Shyán, Khamtí, Láos, &c., are seen to be mere modifications of the Burmese or Pálí alphabet.

This fact would seem to argue that the emigration of the *Ahoms* from their own country *Siam*, had taken place prior to the introduction of the Buddhist religion into that country—but how can this be reconciled with the date of CHUKAPHA?—ED.]

The Language of the Ahoms.

The Ahom is a branch of the Tai language, which is spoken, with some variations, by the Khamtis, the Shyáns, the Láos, and the Siamese, all of whom designate themselves by the general appellation of Tai. Among the Ahoms, or that portion of the Tai race inhabiting *Assám*, the language is nearly extinct, being cultivated only by the priests, as the ancient language of their religion; while their vernacular and common dialect, as well as that of the people, is *Assámese*. As the Ahoms once ruled over *Assám*, it is somewhat surprising that more traces of their language are not to be found in the present dialect of the Assámese, which contains very few words of Tai origin.

As might naturally be expected, the Ahoms, from disuse of their original tongue, have lost many of its peculiar sounds. In conformity with the pronunciation of the Assámese, they give to *w* the sound of *b*; and *y*, they pronounce as *j* or *z*. The sound of the French *u*, which is so common in the Tai, they change sometimes to *ú* and sometimes to *i*. The *intonations* of their original tongue they have entirely lost; one reason of this undoubtedly is, that these intonations were never expressed by the Ahoms in writing. The same is at present the case with the Khamtis and Shyáns, who have no characters expressive of their intonations, having, like the Ahoms, adopted the Burman alphabet, which is inadequate to meet the wants of the Tai language in this respect. The Siamese characters, on the contrary, represent the tones with the greatest precision.

It is, however, remarkable that the language of the Ahoms as pronounced by the priests, corresponds to the Siamese with much greater exactness in some respects, than any of the Shyán dialects spoken between *Assám* and *Siam*.

1. The sound of *b*, frequent in the Siamese and Láos, is converted into *m* by all the Shyáns, while the Ahoms have preserved the regular *b*.

2. The Siamese *d* is changed by the Shyáns to *l*, and by the Khamtis to *n*, but the Ahoms give it its correct pronunciation.

3. The same is true of the letter *r*, which the Shyáns change to *h*.

Alphabets of the TAI Language

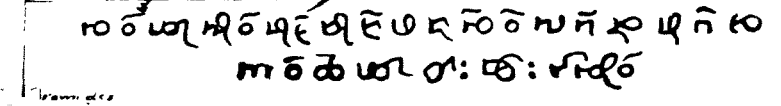
Consonants

Burman	Ahom	Khamti	Shyan	Laos		Roman
						k g
						kh gh
						ng
						ch j
						chh jh
						ny
						t d
						th dh
						d
						dh
						n
						p b
						ph bh
						f
						m
						y
						r
						l
						w
						b
						s
						h
						a

Vowels

Burman	Ahom	Khamti	Shyan	Laos	Roman
					ka
					ká
					ki
					kí
					ku
					kú
					kè (they)
					ke (men)
					ko (nor)
					kô (note)
					kü (french u three varieties)
					kai
					kái
					kau
					káu
					kaü
					keu
					kiu
					koi

Ahom Inscription of an Assam Rupee.



Bishop Tilley.

4. Where double consonants, as *kl, pl, kr,* &c. occur at the commencement of a word, as they frequently do in Siamese, the Shyáns and Khamtis, as well as the Láos, soften the pronunciation by omitting the second consonant; but it is preserved by the Ahoms. I will illustrate each of these remarks by a few examples.

	Siamese.	*Láos.*	*Shyán.*	*Khamtí.*	*Ahom.*	
1.	Bá	bá	má	má	bá	a shoulder.
	Bán	bán	mán	mán	bán	a village.
	Bin	bin	mín	mín	bin	to fly.
	Bo	bo	mo	mo	bo	a well.
2.	Dí	dí	lí	ní	dí	good.
	Deng	deng	leng	neng	deng	red.
	Doi	doi	loi	noi	doi	a mountain.
	Dáu	dáu	láu	náu	dáu	a star.
	Dŭan	dŭn	lŭn	nŭn	dún	the moon.
3.	Rak	rak or hak	hak	hak	rak	to love.
	Rái	rái	hái	hái	rái	bad.
	Ron	ron	hon	hon	ron	hot.
	Rú	rú	hú	hú	rú	to know.
	Rŭa	rŭ	hŭ	hŭ	rú	a boat.
	Rŭan	rŭn	hŭn	hŭn	rún	a house.
4.	Plá	pá	pá	pá	plá	a fish.
	Klai	kai	kai	kai	klai	distant.
	Klŭa	kŭ	kŭ	kŭ	klú	salt.
	Plŭak	pŭk	pŭk	pŭk	plúk	a husk.

From these circumstances we may conclude that the Siamese and Ahom dialects afford a more correct specimen of the original Tai language, than either the Láos, Khamtí, or Shyán; for it is improbable, if the original forms had been simple and easy of enunciation, that they would have been exchanged for others more difficult; but it is perfectly natural that difficult forms should be exchanged for others more simple.

Explanation of the Table.

It is probable that all the alphabets of the Tai, (if we except the Siamese,) were formed from the Burman. The column of Burman letters is merely added for the purpose of comparison. The Ahom, Khamtí, and Shyán alphabets each contain eighteen letters, but this number is quite inadequate to express the various sounds of these languages. The Láos alphabet is more perfect: it contains fewer letters, however, than the Siamese. In the above table we observe that the Láos alphabet contains, to some extent, two distinct characters for each letter of the Ahom and Shyán; one denoting the rising, and the other the falling tone*. The rising-toned letters are set first

* The second column of the Láos consonants embrace the second order or the softer sound of each class of the Indian alphabets, *g gh ; jjh ; d dh ; b bh,* &c.: the *gh* only is formed differently from the same letter of the Burman alphabet. We have inserted these letters in the Roman column on the above

in the column; those on the right hand have the falling tone. Several of the falling-toned letters have no corresponding character for the opposite intonation; when it is required to express this, an *h* is written above the letter, which raises its tone; thus,  *ng*,  *n*, *m*,  *l*, &c. A similar plan is adopted in the Siamese, where the high-toned *h*, is prefixed to other consonants for the purpose of raising their tone.

The pronunciation of the fourth letter in the table is not uniform; the Siamese give it the sound of *ch*, the Láos nearly the same, while all the Shyáns pronounce it as *st*. The next letter, *chh*, is confounded by the Shyáns with *s*. The character for *ph* is used, by the Ahoms and Shyáns, to express both the aspirated *p* and the sound of *f*; the Khamtis for the most part confound these two sounds. The Ahoms use the same character for both *d* and *n*; and also for *b* and *w*; but the latter sound is changed to that of *b*, whenever it occurs at the beginning of a word.

In the table of vowels we also find the sounds represented more fully by the Láos than by the northern tribes; though the Láos are still behind the Siamese in expressing the niceties of the language. The sounds resembling the French *u* and *eu*, or the German *ü* and *ö*, are written alike by the Shyáns, though they are perfectly distinguished in pronunciation; as also the sounds of *ai* and *ái*; *au* and *áu*; *eu* and *iu*. The sound *aü*, which is very common among the Shyáns and Khamtis, does not occur in the Láos. Its place is supplied by *ai*. The long *ó* final of the Shyáns is generally pronounced *óa* or *úa* by the Láos and Siamese. The Shyán character given in the table is that used in the neighborhood of *Ava*; it is the same, with very slight variations, as that used by the Shyáns of *Mógaung*.

NOTE. At the foot of the alphabetical scheme, lithographed from Mr. BROWN'S manuscript, we have inserted the Ahom legend of an Assamese rupee, said to be of CHAKRADWAJA SINHA, who repulsed AURANGZEB'S general, and whose reign commenced in 1621*. The sculptured letters differ considerably in form from the written ones, and there is too much uncertainty for us to attempt applying the Roman character to it, without a native at hand to correct the reading.

We have also given in the two following plates, facsimiles on a reduced scale of the commencement of the manuscript volumes in the

grounds; but the pronunciation must of course, under the author's explanation, be restricted to the sounds of the first column *k kh*; *ch chh*; *t th*; *p ph*, &c.; with the rising or falling intonations respectively.—ED.

* See page 118 of Chronological Appendix.

Specimen of the Khamti character.

from a manuscript of 10 pages, in the Asiatic Society's library.

full size.

J Prinsep Lith

Printed at the Oriental Lith. Press, Calcutta.

Khamtí and Ahom characters, above alluded to as presented by Captain JENKINS. The former commences with an invocation to *Buddha* in the Pálí language and Burmese character, but there are several grammatical errors committed by the Khamtí copyist—the line should run

နမောတဿ ဘဂဝတော အရဟတော သမ္မာသမ္ဗုဒ္ဓဿဣတိ
ဇယတုသဗ္ဗမင်္ဂလံ

Namotassa bhagavato arahato sammá sambuddhassa itíjayatu sabba mangalam.

Praise to the divine object of worship, the omniscient Buddha; through whom may all happiness conquer.

We hope that Mr. BROWN will enable us to insert a translation of the Khamtí and Ahom texts in a future page.—ED.

III.—*Remarks on the Silk Worms and Silks of Assam. By Mr.* THOMAS HUGON, *Sub. Asst. Nowgong.*

[Communicated by Capt. F. JENKINS, Pol. Agent in Assam.]

The following worms producing silk are found in *Assam*. The mulberry worm (large and small), the *eria*, the *mooga*, or *moonga*, the *kontkuri*, the *deo mooga*, and the *haumpottonee*. The five last are indigenous to the country, but there are no reasons to suppose that the first is likewise so. The mulberry is scarce, and none is found in the wild state. The time of the introduction could be, perhaps, ascertained in some of the Assamese *booronjees* or chronicles—(which I was unable to procure immediately to ascertain the point); some of them extending several centuries back—as the Assamese got religious instructors from *Bengal*, it is very probable they also got from there the mulberry tree and worm. The use of the silk being confined to the rája and grandees, and the rearing of the worm to one caste, are additional proofs that its introduction did not precede that of Hinduism—the *joogees* (the caste alluded to) must evidently have come up with it; the Assamese refuse to rear the silk worm, but not having this objection to the other worms would be one proof of the latter being indigenous, were it doubtful.

Mulberry worm.—The management of these worms in *Assam* is nearly similar to what it is in *Bengal*. They are reared within doors, and require the same care and attention as are bestowed on them there; a separate hut is used, which is fitted with bamboo stages with a passage between them and the outer wall—these huts are built north and south with a single door on the east side; this is generally the case, but by no means a fixed rule amongst the Assamese; only one female of the family goes into the house, and previous to doing

it alway washes her hands and feet. With the Assamese the idea prevails as in other parts, that the eye of the stranger is hurtful—their account of this is, that the worms, fancying the stranger is criticising them, get sulky, abstain from food and die.

The large and small mulberry worms are reared in *Assam*. I will describe the rearing of those which produce only one bund a year, (the larger,) they being more in use than the others in this district. It will be sufficient to shew how far the process assimilates to that followed in *Bengal* and other parts. The moths are made to deposit their eggs on pieces of cloth—these are packed up with the household clothing; when the time of hatching approaches (December), they are taken out and exposed to the air; when the worms are hatched they are fed the first three or four days on the tender leaves cut up, in new earthen pots; then on a bamboo tray. After the first moulting they are removed to the *mutchang* (*machán*) or stages. When they are about beginning to spin, they are put on bamboo trays fitted up with pieces of matting fixed perpendicularly at intervals of two inches: these in the first afternoon are exposed for half an hour to the side where the sun is shining, and afterwards hung up in the house. After leaving as many as are required for breeding, those that are to be wound off, after having been exposed to the sun for three or four days, are put over a slow fire in an earthen vase full of water. One person winds off the silk with an instrument made of three pieces of stick joined together thus, the perpendicular one is held at one end with the right hand, and the left directs the thread over the cross bars—taking care in doing this to make it rub against the fore-arm to twist it—whilst another person attends to the fire and the putting on new cocoons. When a sufficient quantity for a skein has thus accumulated it is taken off the cross bars.



There are hardly any plantations of mulberry in *Assam*, on such a scale as to be worth mentioning; a few men of rank have small patches of it, sufficient to produce silk for their own use;—the few ryuts that sell the silk generally have not more than a seer to dispose of in the year,—the produce of a few plants round their huts or in the hedges of their fields. The leaves are not sold as in *Bengal*, and when a ryut's own supply fails, he obtains it from neighbors who have a few trees merely for the fruit. The worms are reared by *joogees* alone, people of an inferior caste:—those of the highest can cultivate the plant and do all the out-of-door work—but none but a *joogee* can, without degradation, attend to the worms or touch the silk whilst reeling. As the same prejudice does not exist in *Ben-*



gal, it must have been kept up purposely by the despotic rulers of the country, after mulberry cultivators were introduced, to ensure the use of the silk being confined to themselves and their courtiers—a selfishness which may be observed in many of their rules and prohibitions: this alone would have been a bar to the extension of the cultivation of the mulberry in *Assam*, were there not already greater facilities of obtaining silk from the *mooga* and *eria* worms. No mention is made of silk in the returns of the Hydra chowkey, I do not think half a maund of it altogether is exported in any shape—the price of it is eight or ten rupees a seer, but it is not readily procurable. Mr. Scott, a few years ago, introduced from *Rungpoor*, reelers, reels and plants of the *morus alba*, and established a factory at *Darang*, with a view to extend the culture of mulberry silk, and improve the reeling of the *mooga*. Several causes rendered the experiment abortive, the want of European superintendence and Mr. Scott's untimely death being the principal ones*.

Eria silk.—The *eria* worm and moth differ from the mulberry worm and moth in every respect, as will be better understood by the accompanying drawings and insects: like it, however, it goes through four different moultings, but its sickness in doing it lasts only twenty-four hours; the last stage takes eight days, the others four. The duration of its life varies according to seasons: in summer it is shorter, and the produce both greater and better; at this season, from its birth to the time it begins its cocoon, twenty to twenty-four days expire, in fifteen more the moth comes forth, the eggs are laid in three days, and in five they are hatched, making the total duration of a breed forty-three to forty-seven days: in winter it is nearly two months; the number of breeds in the year are reckoned at seven.

This worm is, like the mulberry worm, reared entirely within doors: it is fed principally on the *hera* or palma-christi leaves, it eats the mulberry leaf also but is said to prefer the former: when the palma-christi leaves fail, they are also fed on those of several other trees known in this part of *Assam* by the following names:—

1. Kossool.
2. Hindoo gass.
3. Meekeerdal.

* From the opinions given by several merchants of *Calcutta* on samples of *Assam* mulberry silk, reeled on Italian reels from worms properly fed and attended to, I am led to believe this province exceedingly favorable to the production of very superior silk.—The samples sent down would have fetched the highest prices in the Calcutta market, and they were got up under the unfavorable circumstances of a rude experiment.—F. Jenkins.

4. Okonnee.
5. Gomarree.
6. Litta Pakoree.
7. Borzonolly.

The worms thrive best and produce most when entirely fed on the palma-christi—it is the only plant which is cultivated purposely for it, there is hardly one ryut who has not a small patch of it near his house or on the hedges of his fields—it requires little or no culture —the ground is turned up a little with the hoe and the seeds thrown in without ploughing; whilst the plant is young it is weeded once or twice, but it is afterwards left to itself. The plant is renewed every three years. On the leaves of Nos. 1 and 2, worms can be reared entirely, but they do not thrive well upon it, many die even after having begun the cocoons, and the few of these that are got are small and yield but little. These and the others are only used in the fourth or fifth stage when they are considered to answer quite as well as the palma-christi leaves. The *kossool* (No. 1) alone can be given alternately with the palma-christi. The whole of these trees are found in the forests, but not cultivated.

To breed from, the Assamese select cocoons from those which have been begun in the largest number on the same day—generally the second or third day after cocoons have begun to be formed—those that contain males being distinguished by a more pointed end. These cocoons are put in a closed basket and hung up in the house out of reach of rats and insects. When the moths come forth they are allowed to move about in the basket for twenty-four hours; after which the females, (known only by the larger body) are tied to long reeds or canes, twenty or twenty-five to each, and these are hung up in the house. The eggs that have been laid the first three days amounting to about two hundred are alone kept, they are tied in a piece of cloth and suspended to the roof until a few begin to hatch—these eggs are white, and the size of turnip seed; when a few of the worms are hatched, the cloths are put on small bamboo platters hung up in the house, in which they are fed with tender leaves; after the second moulting they are removed to bunches of leaves suspended above the ground, under them upon the ground a mat is laid to receive them when they fall; when they have ceased feeding they are thrown into baskets full of dry leaves, amongst which they form their cocoons, two or three being often found joined together.

The caterpillar is at first about a quarter of an inch in length, and appears nearly black; as it increases in size it becomes of an orange color, with six black spots on each of the twelve rings which form its body.

The head, claws and holders are black; after the second moulting they change to an orange color, that of the body gradually becomes lighter, in some approaching to white, in others to green, and the black spots gradually become the color of the body; after the fourth and last moulting the color is a dirty white or a dark green: the white caterpillars invariably spin red silk, the green ones white. On attaining its full size the worm is about three and half inches long: unlike the *mooga* caterpillar, its colors are uniform and dull, the breathing holes are marked by a black mark—the moles have become the color of the body, they have increased to long fleshy points, without the sharp prickles the *Mooga* worm has; the body has a few short hairs, hardly perceptible.

In four days the cocoons are complete; after the selection for the next breed is made, they are exposed to the sun for two or three days to destroy the vitality of the chrysalis. The hill tribes settled in the plains are very fond of eating the chrysalis—they perforate the cocoons the third day to get them, they do the same with the *mooga* and sell few cocoons imperforated.

The cocoons are put over a slow fire in a solution of potash, when the silk comes easily off: they are taken out and the water slightly pressed out: they are then taken one by one, loosened at one end and the cocoon put over the thumb of the left hand, with the right they draw it out nearly the thickness of twine, reducing any inequality by rubbing it between the index and thumb; in this way new cocoons are joined on. The thread is allowed to accumulate in heaps of a quarter of a seer: it is afterwards exposed to the sun or near the fire to dry; it is then made into skeins with two sticks tied at one end and opening like a pair of compasses: it is then ready to be wove unless it has to be dyed.

The dyes used are lac, munjeet and indigo, and the process of dying is as follows.

Red Dye.—The lac after having been exposed to the sun to render it brittle, is ground and sieved as fine as possible: it is steeped twelve hours in water, after which the thread is thrown in with the leaves of a tree, called by the Assamese *Litakoo*—(*Pierardia sapida?* F. J.) When it has absorbed most of this mixture, it is taken out, put over two cross sticks, and shaken a short time to detach the threads well from each other: it is dried in the sun and the same process again gone through twice. When it is wished to increase the brightness of the color, it is again dyed with munjeet: the latter is dried in the sun and ground in the same way, it is steeped for forty-eight hours; the threads are put in and boiled in the same way, but with the leaves of a

different tree (the *Koh*) : the thread is dried in the sun, and is ready for use. Nearly the same process is gone through for the blue : instead of the common indigo, they sometimes use the *Room*, which plant is, I believe, *Ruellia callosa*—also the leaves of a very large tree found in the forests, called by them *Ooriam*. The thread is wove as cotton. The different prices of the cloths and their use will be found in an annexed table ; their clothes are mostly used for house consumption, a few are bartered with the Bhotias and other hill tribes. Large quantities were formerly exported to *Lassa* by merchants, known in *Derung* as the " Kampa Bhotias,"—the quantity they used to take away, was very considerable, but in the latter years of the *Assam* rája's rule, from the disorganized state of the country, the number of merchants gradually decreased ; three years ago only two came after a long interval, one of them died, and I believe the trade has not again been revived : those two merchants complained that they could no more procure the cloths suited to their markets. No exports of it are mentioned in the returns of the Hydra-chowkey. The quantity the country is capable of exporting under an improved management would be very large, for it forms at present the dress of the poorer classes at all seasons, and is used by the highest for winter wear.

I have been unable yet to ascertain the quantity of this silk obtainable from one acre of land, no man can tell me the extent of his plantation, or even the quantity of Eria thread he got in a year beyond this, that he had enough for the use of his family ; every ryut has a few plants round his house or farming hedges—which would at most amount to the twentieth part of an acre ; so that for this to afford clothing for a family the produce must be very large indeed.

Mooga Silk.—Although the *mooga* moth can be reared in houses, it is fed and thrives best in the open air and on the trees. The trees which afford it food are known in *Assam* by the following names :—

1. Addakoory.
2. Champa, (*Michelia.*)
3. Soom.
4. Kontooloa.
5. Digluttee, (*Tetranthera diglottica*, HAM.)
6. Pattee shoonda, (*Laurus obtusifolia*, " ROXB.")
7. Sonhalloo, (*Tetranthera macrophylla*, " ROXB.")

Silk from No. 1. *Addakoory.*—The Addakoory, the worms fed on which produce the *Mazankoory mooga*, is a middle-sized tree, used for rearing worms only when under four years. It sprouts up where forests have been cleared up for the cultivation of rice or cotton. The worms that are put on the tree on the first year of their appearance

above the ground produce the best silk. The second year the crops are inferior in quality and quantity, and the third it is little if at all superior to the common *mooga*. The *Mazankoory* silk is nearly white, and its value fifty per cent. above that of the common fawn-colored.

The tending of the worms on this tree is much more laborious than on any of the others: young trees only being used, they have to be constantly removed to fresh ones: the smoothness of the bark also renders it necessary to help them in moving from branch to branch. This tree is more abundant in *Upper* than in *Lower Assam*—last year it was for the first time found to exist in the forests of the *Morung*, on the eastern boundary of this district: the Upper Assamese who are settled throughout this district (they form one-fourth or one-fifth of our population here), have never met with it in any other place.

No. 2. *Champa.*—The Champa is found, as the Addakoory, where forests have been cleared: the silk of the worms fed on it is called "*Champa pootia mooga.*" It is held in the same estimation as the "*Mazankoory*;" I do not know whether it is also used when young—the tree is not met with in *Lower Assam*.

No. 3. *Soom.*—The Soom is found principally in the forests of the plains and in the villages, where the plantations of this tree are very extensive. It attains a large size and yields three crops of leaves in the year: the silk produced by it is of a light fawn color, and estimated next to the *Mazankoory*: the plantations are most abundant in the eastern half of this district.

No. 4. *Kontooloa.*—This is a large tree found both in the hills and the plains—also a few in the villages: the leaves are too hard for young worms: they are reared on the preceding (No. 3), till the third moulting, and then put on this tree; by which process the silk obtained is stronger than that from worms reared entirely on the Soom.

No. 5. *Digluttee.*—A tree of a small size not much used on that account: the silk equal to that obtained from No. 3.

No. 6. *Pattee shoonda.*—Middle-sized tree, found principally in forests—few to be met with in the villages of *Lower Assam*—used when the leaves of No. 3 are done.

No. 7. *Sonhalloo.*—The Sonhalloo is found in the forests of the hills and plains, where it attains a very large size: it is also found in the villages, where in six years it attains its full growth (thirty feet); it is very abundant in the western portion of this district. *Rara, Jumna, Mookh, Jyntea,* and the valley of *Dhurmpoor*—at the latter place, where the hill tribes of *Mikirs* and *Kachâris* clear dense forests for the cultivation of rice and cotton, numbers of the plants spring up

spontaneously. After three or four years when the land getting poorer requires more tillage and the use of the plough, these tribes who only use the *kar*, or hoe, remove to new forests and leave behind them plantations of these trees, which they have used during the short period they have remained. To them, the ryuts of the more settled parts resort in the spring to rear up worms: the silk of the Son-halloo-fed worm is considered inferior to the preceding—more I believe from its darker color than any other cause.

There are generally five breeds of *mooga* worms in the year, they are named after the months at which they generally occur.

1. *Jarooa*, in January and February.
2. *Jeytooa*, in May and June.
3. *Aharooa*, in June and July.
4. *Bhodia*, in August and September.
5. *Khotia*, in October and November.

The first and last are the best crops as to quality and quantity. Nos. 3 and 4 yield so little and so inferior a silk, that they may be said to be merely for the purpose of continuing the breed. Were the Assamese acquainted with the process of retarding the hatching of the eggs as is practised in *China*, in regard to the mulberry silk-worm, they would, I think, find it more advantageous to have only three or four crops.

The same rule is followed in the selection of cocoons to breed from as in the *Eria*. They are put in a closed basket suspended from the roof: the moths as they come forth having room to move about, after a day the females (known only by their larger body) are taken out and tied to small wisps of thatching grass, taken always from over the hearth—its darkened color being thought more acceptable to the moth. If out of a batch there should be but few males, the wisps with the females tied to them are exposed outside at night: the males thrown away in the neighbourhood find their way to them: these wisps are hung on a string tied across the house to keep them from the lizards and rats. The eggs laid during the first three days (about 250) are the only ones thought worth the keeping: those laid on the two or three subsequent days are said to produce weak worms. The wisps are taken out morning and evening, and exposed to the side where the sun is shining: ten days after the laying of the eggs, a few of them are hatched: the wisps are then hung up to the tree, the young worms finding their way to the leaves—care must be taken that the ants have been destroyed, their bite proving fatal to the worm in its early stages. To effect this they rub the trunk of the tree with molasses and tie to it fish and dead toads. When large

numbers have been attracted to one place they destroy them with fire; this they do several times previously to the worms being put on; the ground under the trees must be kept clear of jungle to make it easy to find the worms that fall down—young trees are preferable until the second moulting.

To prevent the worms coming to the ground, fresh plantain leaves are tied round the trunk, over the slippery surface of which they cannot crawl. They are removed to fresh trees on bamboo platters tied to long poles.

Bats, owls, rats, are very destructive at night: in the day the worms require to be constantly watched—crows and other birds being so fond of them, that they lie in wait in the neighbouring trees. An old lady's doze over her morning "canee" (opium), however short, is sure to be fatal to several worms—the *goolail* which is always at hand often punishes the thief, but the mischief is done.

Numbers are destroyed in the more advanced stages by the sting of wasps—and by the ichneumon insect which deposits its eggs in their body. These are hatched when the cocoon is half formed: they perforate it at the side and the chrysalis is found dead: the worms which have thus been stung are known by black marks on their body. Were the people more careful in their management, this would be of little consequence: by making these worms spin apart, the cocoon being formed before the chrysalis is killed, the silk could be saved.

The worms thrive best in dry weather: but a very hot sunny day proves fatal to many at the time of moulting. At these periods rain is very favorable, thunder storms do not injure them as they do the mulberry worm; continual heavy-rains, (which are rarer in *Assam* than in *Bengal*) are hurtful by throwing them down—showers, however heavy, cause no great damage, they taking shelter under the leaves with perfect safety. The worms during their moultings remain on the branches, but when about beginning to spin they come down the trunk, the plantain leaves preventing their going further down they are collected in baskets, which are afterwards put under bunches of dry leaves suspended from the roof—they crawl up into these and form their cocoons—as with the *Eria* several are often joined together. The silk of these they spin instead of winding: above the plantain leaf a roll of grass is tied for those that come down during the night to begin spinning in—after four days the selection of cocoons for the next breed is made and the rest wound off.

The total duration of a breed varies from sixty to seventy days. The period is thus divided—four moultings, with one day's illness attending each, ... 20

From fourth moulting to beginning of cocoon,	10
In the cocoon,	20
As a moth,	6
Hatching of the eggs,	10
	66

On being hatched the worm is about a quarter of an inch long, it appears composed of alternate black and yellow rings; as it increases in size the former are distinguished, as six black moles, in regular lines on each of the twelve rings which form its body. The colors gradually alter as it progresses, that of the body becoming lighter, the moles sky-blue, then red with a bright gold-colored ring round each. When full grown the worm is above four inches long; its colors are most brilliant and varied in shades: the body appears transparent and is of a very light yellow or dark green color, with a brown and a yellow streak at the sides; in the latter the breathing holes are distinguished by a black speck: the moles are red and have each four sharp prickles and a few black hairs: the head and claws are of a light brown, the holders green and covered with short black hair; the last pair have a black ring on the outside. On being tapped with the finger the body renders a hollow sound; by the sound it is ascertained whether they have come down for want of leaves on the tree, or from their having ceased feeding.

The chrysalis not being soon killed by exposure to the sun, when they have many cocoons they put them on stages, cover them up with leaves and burn grass under them; the cocoons are then boiled for about an hour in a solution of the potash made from the dried stalks of rice, they are then taken out and laid on cloth folded over to keep them warm; from this they are taken as required and thrown in hot water (not over the fire) after the floss has been removed with the hand. The instrument used for winding off the silk is the coarsest imaginable: a thick bamboo about three feet long is split in two, and the pieces driven equally in the ground two feet apart: over the interior projection of one of the knots is laid a stick, to which is fixed, a little on one side, a round piece of plank about one foot in diameter —the rotary motion is given by jerking this axle, on which the thread rolls itself: in front of the vessel holding the cocoons a stick is fixed horizontally for the thread to travel upon. Two persons are employed—one attending the cocoons, the other jerks the axle with the right hand and with the same hand directs the thread up the left forearm, so that it is twisted in coming down again towards the hand; the left hand directs the thread over the axle. Fifteen cocoons is the



The Tree Silk moth
Bombyx religiosæ



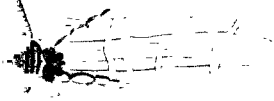


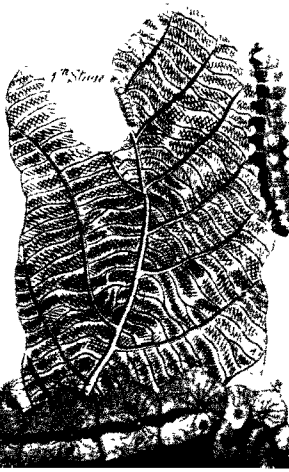


Chrysalis



Moonga Silk worm
and moth





5th Stage



K Hudson des

Kasmati

smallest number they can wind off in one thread, twenty the number generally; even the last is often broken from the coarseness of the instrument used, although the fibre is much stouter than that of the mulberry silk. When nearly a quarter of a seer has accumulated on the axle, it is dried in the sun and made into skeins of one or two rupees weight. This is done with a small bamboo frame set in motion by the common spinning machine of the country: if it has to be dyed the same process is followed as with the *Eria*. The cloths usually made of *mooga* and their use will be found in the annexed table: besides those, I have seen it used as the warp with cotton, and the cloth so made is a little lighter color than nankin and much stronger; but this is seldom done, from the trouble of spinning the cotton fine enough. Cotton twist adapted to that purpose would, I think, meet a ready market.

The exact quantity of silk which an acre of *mooga* trees can produce could not be ascertained without a trial. Fifty thousand cocoons per acre*, which makes upwards of twelve seers, are considered by the Assamese a good yearly return. Sixty rupees the value of twelve seers must be a very profitable one, for there is little labor or expense to the ryut in making or keeping up a plantation: whilst the trees are young, the ground is available for cultivation besides rearing worms; sugar-cane, rice, pulse, &c. are cultivated with benefit rather than injury to the young trees. The tax is fourteen annas the acre in this district. The great value of the *mooga* is, that it enables the weaker members of a family to contribute as much as the most robust to the welfare of the whole. Besides attending to the worms most of them weave, spin or make baskets, while watching them.

From causes which I have been unable to ascertain, and of which the natives are ignorant, the *mooga* some years failed so completely in particular districts that none was left to continue the breed. There being very few weekly *hauts* or markets to resort to, to procure cocoons for breeding from the more fortunate people of other districts, a failure of this kind in one place is sensibly felt for two or three years after in the production. The time of the ryut, who has at most half or a quarter of an acre of *mooga* trees, is too valuable to allow of his being absent for a month and more, going from village to village, and house to house to find out the people who have cocoons for sale. This last season in our *Jumna-múkh* (*Cachar*) pergunnah the *mooga*

* An Assamese Poorah of land is a little more than an English statute acre, and such lands hitherto have not been taxed, or at a very low rate, if cultivated with other crops besides the *mooga*.

was a complete failure; there are no worms on the trees now, from inability to procure cocoons, although there was a very abundant crop in two perganahs at the opposite end of the district.

The *mooga* plantations are principally round the ryuts' houses, and are included in house-lands. By this year's measurement of the Barree lands in the three divisions of the *Nowgong* zillah where the land tax obtains, the quantity in actual occupation (exclusive of those which being unclaimed have reverted to the state) amounts to 5350 acres: the proportion of *mooga* plantations is upwards of one-fourth or 1337 acres. In the five other divisions of the same zillah, which are three times the area, and have more than double the population, but of which we have no accurate measurements, I will only venture to estimate the quantity of *mooga* plantations at half that of the other three or about 600 acres, but on this low calculation there would be a total of 2000 acres for *Nowgong*. Estimating the plantations of the *Derung* and *Kamrúp* zillahs at only 1500 acres each, there would be a total of 5000 acres of those plantations in *Lower Assam*, exclusive of what the forests contain of them: this quantity is capable of producing in one year 1500 maunds. In *Upper Assam* I understand the plantations are more extensive than ours.

4. *Kontkúrí Mooga.*—This worm feeds on many trees besides the "*mooga* trees;" it is found oftener on the *bair, (Zizyphus jujuba,)* and the *seemul, (Bombax heptaphyllum,)* but not in great quantities. The worms, moths and cocoons are considerably larger than any of the others; indeed the cocoon is the size of a fowl's egg. Several Assamese told me they had vainly attempted to domesticate them; the eggs have been hatched, but after observing the worms for a few days on the trees they have at once disappeared. They attributed this to its being a "dewang" or spirit; the real cause may probably be its being fond of changing its food, and gifted with greater locomotive powers than the generality of the silk-worms. I have been told by some Bengalees that it is found in *Bengal* in the wild state on the "bair" as in *Assam*, and called "Gootee-poka;" it is there reeled off like the mulberry silk and much valued for fishing lines, but not wove, probably from its scarcity. The fibre is stronger than that of the *mooga* and of a lighter color.

5. *Deo Mooga.*—I accidentally became acquainted with this worm, which is very little known to the natives and entirely in the wild state. Three years ago being employed in *Jumna-múkh (Cachar)*, I had occasion to take some bearings, for which purpose I had a white cloth put up on a large "Bur" tree, *(Ficus Indica;)* the year after, being near the same spot, the ryuts came and told me that two months after

I left (April), they observed that the tree had lost all its foliage, they went to it and found in the surrounding grass and dry leaves, a large number of small cocoons; these they spun like the *eria* out of curiosity and used it with the latter. They took no further notice of succeeding breeds, finding the thing of little present use. I lost a few cocoons which I procured at the time, but have lately seen both the worm and the cocoon, the former is quite different from any other; it is more active, its length is under $2\frac{1}{2}$ inches, the body very slender in proportion to its length, the color reddish and glazed. I could not observe them more particularly, as they were brought to me one evening at dusk: I put them in a box, with the intention of examining them the next morning, but they disappeared during the night, although it was open very little to admit the air. The moth is very much like that of the mulberry, so is the cocoon also in appearance, color and size; I have questioned many of the natives about this worm, but none had ever seen it before—their opinion of it is that it is a "dewang" (spirit) brought there by the prismater compass and the white flay—this made them call it *deo mooga*.

The *haumpottonee*, a caterpiller very common in *Assam* (and elsewhere perhaps), may also be mentioned as one of the varieties of the species, although it forms but a very imperfect cocoon: it feeds on most leaves. I have had no opportunity yet of observing it myself; but am told by the natives that it goes through similar stages to the others; the worm is about two inches long, of a brown color and covered with hair, the moth of the same color as the *mooga* moth but only half the size; the cocoon has this peculiarity, that it is quite transparent, so that the chrysalis can be seen inside; at one end of it a small opening is left—the cocoon is of a yellow color—it can be spun like the *eria* cocoon, but the Assamese do not use it, on account of its silk causing a severe itching in wearing.

I have questioned several Bengalees settled in *Assam* and who have been at *Midnapur*, regarding the identity of the *mooga* and *tussur*; they say that the worm is the same, but that at the latter place they are fed on a different tree: the point could be better ascertained by a comparison with the drawings and preserved worms which accompany these remarks. The Burmese envoys who have just left *Assam* told me that the *mooga* was unknown in their country previous to the conquest of *Assam*; but that it had since been introduced by the Assamese who were carried off and settled in the Burmese territory: the *Cacharis* also admit that it is not many years since it was introduced into *Cachar*, (south of the hills.) In *Cooch Behar* both it and the *eria* are almost unknown to this day; the prevailing opinion amongst the natives of

these parts is, that both species *(mooga* and *eria)* are indigenous to *Upper Assam* and were introduced from thence. It has always appeared to me that the production of these silks is greater as one advances to the east—it is to this day procurable more abundantly in *Upper Assam* than any where else, especially in the district of *Lukinpoor* on the north bank of the *Burhampootur*.

Little *eria* is exported, but the *mooga* forms one of the principal exports of *Assam;* the average of the quantity passed at *Gowalpara* during the two last years that duties were levied, was two hundred and fifty-seven maunds, valued at fifty-six thousand and fifty-four rupees: it leaves the country principally in the shape of thread. Most of it going to *Berhampoor*, it is probable that the cloths made from it pass under the name of *tussur;* the latter as far as I recollect, appears to have less gloss. The Hydra chowkey returns comprise only the products exported by water. The total quantity that leaves the province may, I think, be estimated at upwards of three hundred maunds, for *mooga* forms also a portion of the traffic with *Silhet* (across the hills) the *Cassyas*, *Bhotias*, and other hill tribes. The Assamese generally keeping more for their own use than they sell, the total quantity produced in the province may be reckoned at six or seven hundred maunds. It has been in great demand in *Bengal*, for within the last few years, although the production has been greater from the more settled state of the country, the price has risen 20 per cent. When I first arrived in this district, it could be obtained without difficulty from the ryuts at three and a half to four rupees the seer; now it is difficult to procure it at five rupees. The competition is so great, that the traders pay for it in advance, not as with other products, to get it at a lower rate, but merely to secure their getting it. This competition is also owing to the greater number of small traders who resort to the province since the abolition of chowkeys—which may have caused a rise on the price of the product in *Assam* without a corresponding increase in the exports.

No gradual improvement can be traced in the mode of rearing the several worms or winding their silk—it is now what it was a century ago, there being no European speculators in *Assam*, nor it being probable that when any venture so far they would readily risk the capital in quite a new branch of industry. This important product of the country is likely to remain for years unimproved, unless the subject should again be taken up by Government. The small factory set up by the late Mr. SCOTT, to which I have before alluded, was kept up too short a time to have had any perceptible effect. Mr. SCOTT's declining health and numerous duties never allowed him to give it a

moment's personal attention, nor could his assistant do it, having then the same work to do which now employs several officers; the factory was therefore left entirely under the direction of natives. These, to add to their own importance, rather increased, than alleviated the fears that the Assamese, (who had labored under so many restrictions,) naturally entertained of imitating or using any thing pertaining or appropriated to the "Rája;" such a presumption in the good old times might have cost a man his ears or his nose. The residence of European officers in different parts of the country having undeceived the people as to those restrictions, there would be now great facilities in introducing improvements—although the ryuts individually have not the means of getting reeling machines, however simple and cheap, they would, as with sugar-mills, club together to obtain them, were it only shewn to them that there was any advantage, in the use of them. *Mooga* thread is every day increasing in value; I have marked its rise from three rupees eight annas, to five rupees in the short space of three years; in *Gowalpara* it sells at six rupees eight annas or seven rupees; in *Dacca* and *Moorshedabad* at eight rupees. This is, I believe, not more than thirty per cent. below mulberry silk in *Calcutta*; the primitive process of the Assamese which I have described will, perhaps, shew a possibility of this difference being made up by superior management. The *mooga* silk could be used in colored fabrics, being easily dyed. In its natural fawn color it stands washing much better than silk, keeping gloss and color to the last; the natives bleach it with a solution of the potash made from plantain trees, this they also use in washing their cloths, both cotton and silk: soap was unknown previous to the British occupation of the country.

Another object of great interest, which might become of great importance to this province, is, to ascertain the possibility of rendering the *eria* marketable in some shape or other; the way of preparing it (already described,) is such that the cloth made of it when new looks as rough as "taut" (or gunny); it is only by repeated washings that it attains a softness of feel and gloss which approach that of silk. It is highly improbable that amongst the natives, repeated trials should not have been made of reeling instead of spinning these cocoons, but from their failing it would be wrong to lay it down as an impossibility: they have merely tried it as other cocoons and given it up when they found that the fibre "did not come," as one of them told me. I had it tried before me with a few cocoons, but with the greatest care the fibre could not be drawn off beyond a few yards without breaking, the cause of this appeared to me to be a greater adhesiveness in the fibre than with other cocoons. it was drawn off with diffi-

culty and with a crackling noise—until it brought several layers with it, from which it could not be detached without breaking, some thing may perhaps be hereafter found to reduce that adhesiveness. It is, I think, unlikely that the worm should spin in a different way from all others, allowing this to be the case, great improvements could be made in the spinning, by, no doubt, the introduction of the process in practice in Europe to spin perforated cocoons, from its cheapness it would perhaps be advantageously used with wool—especially in stockings, it would add softness and gloss without taking from the warmth, the cocoons costing only one rupee, the thread two rupees per seer.

Although I have been unable to form an estimate of the land taken up on the cultivation of the "*hera*" or palma-christi, a very rough one could be made of the total quantity of *eria* silk produced by referring to the population; it being the daily wear of the poor, and besides, being used by every class in winter. The population is reckoned at 455,000*, therefore estimating the yearly consumption of each individual at the lowest, the total quantity produced would be upwards of 1000 maunds, most of this could be exported if it acquired the least additional value by better management, and be replaced by other manufactures and by an increase in the growth of cotton. The product would keep pace with any increase of demand, for there is hardly a house in the country where these worms are not reared.

Being acquainted only with central *Assam* and this district in particular, *Upper Assam*, the Moamariya country, the Bhotan territories in the plains are left out of these remarks and estimates†. Although the population assimilates, in many respects they may differ in their different processes. I have used as few local terms as I could except with regard to the tree and plants whose botanical name I have not been able to ascertain.

P. S. In the within Mr. HUGON has said nothing of another silk worm which was lately discovered on a pipul tree *(F. religiosa)*—and of the moth of which a drawing accompanies with three or four cocoons, a chrysalis and two moths. This looks very like the mulberry moth, but I am not able to say whether it is or not. The silk looks very fine

* By the statistical report of 1835,—Kamroop district, ... 280,000
Dorung ditto, ... 95,000
Nowgong ditto, ... 80,000

† The population of *Upper Assam* is estimated at, ... 220,000
Moamariya, ... 50,000

270,000

Toolaram's country, Jyntia, ...
Bhotan territory in the plains, ... } no estimate is ever made.

and it may be considered a curiosity even if it be the produce of a mulberry worm, for the question arises on what was the worm fed?—if on the *F. religiosa*, it is, I believe, a discovery, that the silk worm would feed on the leaf of any tree but the mulberry; if the worm is distinct from the *Bombyx mori* it is a still greater curiosity.

Mr. HUGON has been unable to determine whether the worm now alluded to, is the same as the *deo mooga* mentioned within: he is inclined to think not from the color of the cocoons and the slight observations he was able to make on the latter; but from both feeding on the leaves of two trees so nearly allied, I should suppose it likely that the worms were identical. It would be a discovery of some importance to find worms affording any tolerable silk that fed on these species of Ficus which are so abundant here.—F. JENKINS.

List of the Cloths made in Assam of Mooga and Eria Silks.

Names of Cloth.	Size in Cubits.	Weight.		Price of Thread.			Cost of Weaving			Total.			Remarks.
		Seer.	Chk.	R.	A.	P.	R.	A.	P.	R.	A.	P.	
Mooga.													
Soorias,....	7 by 1½	0	6	1	14	0	0	3	0	2	1	0	Dhoties.
Ditto,.....	16 ,, 2	1	0	5	0	0	0	8	0	5	8	0	
Mekla, ...	5 ,, 1¾	0	4	1	4	0	0	2	0	1	6	0	Petticoats.
Rhia, ...	12 ,, 1¼	0	8	2	8	0	0	4	0	2	12	0	Scarfs.
Gaursha, ..	8 ,, 1	0	2	0	10	0	0	1	0	0	11	0	Worn as turbans or round the waist.
Joonta Bor Cappor,..	12 ,, 2½	1	0	2	0	0	0	6	0	2	6	0	Made of the floss and worn in winter.
Eria.													
Bor Cappor,	16 by 3	1	8	3	0	0	0	8	0	3	8	0	Worn in winter and used as a blanket, also made into coats.
Meklas,....	5 ,, 2	0	6	0	12	0	0	2	0	0	14	0	Used only by the poorer class.
Rhia, ...	10 ,, 1½	0	8	1	0	0	0	2	0	1	2	0	
Gaursha, ..	8 ,, ½	0	4	0	8	0	0	2	0	0	10	0	

Memorandum upon the specimens of Silk, and Silkworm from Assam, by W. PRINSEP, *Esq.*

The *mooga* or *tussur* cocoons, are very fine, particularly those fed from the *soom* and the *sohaloo* trees which are superior to the produce of the jungles about *Bankoora*.

The thread from these worms, is quite equal to that which is used in the best *China* tussur cloths.

The specimens of cloth wove from these threads, are not equal, however, either to the *Bengal* tussur cloth, nor to the *China* cloth of the same description.

The *eria* cocoon, thread, and cloth are all new to us: I have never seen them in *Bengal*, except now and then a few pieces of the cloth

imported from *Rungpur;* it appears to be more cottony than the tussur, and to make a web warmer and softer than the tussur cloth, but it is not so strong.

The cocoons called *haumpottonee* are unknown to us in *Bengal,* and appear to be of small value both as to quantity and texture: moreover I imagine it would be very difficult to reel them into thread.

The *deo mooga* cocoons are very small but are fine and soft, and when fresh would yield, I doubt not, a very delicate white thread: they are smaller than our dèsee (country) cocoon.

The specimen of country worm silk is very fair, and if dressed would be quite equal to our *Patna* thread, from which korahs and other silk piece goods are made.

The specimen of iron reel (or station method) is very good, indeed, equal to our best native filature letter A: the thread is even, soft, sound and remarkably strong, so that it may be well ranked with our best second quality from the filatures of Bengal.

IV.—*On the indigenous Silkworms of India. By* T. W. HELFER, *M. D. Member of the Medical Faculties at the Universities in Prague and Pavia, Member of the Entom. Society in Paris, &c.*

[Read at the Meeting of the 4th December.]

Silk was in all times an article of the greatest importance throughout the ancient world.

China gained its celebrity in the classical time of the ancients, as the mother-country of that mysterious texture, which it manufactured from time immemorial, with a high degree of perfection, and called *se* or *ser;* whence all India and its eastern unknown boundaries derived the name *Serira.*

It made the satraps of the western world, the rulers of *Rome* and the emperors of *Byzant,* envious of its possession, and the home brought golden fleece of the fabulous Argonautes, was perhaps nothing else than the precious web of the *Bombykia.*

The emperor JUSTINIANUS got an insight into the secret by two adventurous Persian monks, who brought the eggs of the Chinese silkworm in a hollow bamboo cane, safe over the icy chains of the *Himálaya,* the barren plains of *Bokhara,* and the ruggy mountains of *Persia,* to the distant eastern capital. He considered it a point of great importance to reserve to himself the monopoly of such a precious article, though master of the riches of his vast empire.

The Sicilians in the time of ROGER the first, became a wealthy people by its introduction into *Palermo*—the Venetians were enabled by the trade of silk chiefly, to build their immortal maritime bulwark, and in our days the introduction and manufacture of silkworms is a source of unlimited riches to the countries of *Europe*, where it is cultivated on a large scale.

To elucidate this it may be observed, that *France* alone exported in the year 1820, wrought silk to the value of more than 123 millions of francs.

The importation of raw and worked silk into *England*, amounted to 4,547,812 pounds in the year 1828, of which about 1,500,000 pounds were brought from *Bengal*, 3,047,000 pounds were, therefore, brought from foreign countries, chiefly *Italy* and *Turkey*.

The northern parts of *Europe* and chiefly *England* are less suited for its cultivation on account of climate.

Great Britain, *France* and *Germany*, finding by experience, that the demand is constantly greater than the supply, resorted to different substitutes.

Different substances presenting analogies to that beautiful filament were examined. The spider's web was tried in *France*, first by Mr. BON: but Mr. REAUMUR found that the war-like propensities of the *Arachnidæ* hindered their being reared in great numbers, and this enterprize has been in our days entirely abandoned.

Men resorted to the *Mollusca* and found that the maritime *pinna* gives a filament like silk, having the power to produce a viscid matter which it spins round the body. A beautiful and very durable silk was produced from it, the Byssus of the ancients, but it was always dearer than the common silk of the *Bombyx mori*, and though to this day caps, gloves and stockings are woven from it in *Calabria* in *Sicily* (I saw myself a considerable manufacture of it in *Palermo*), it will probably remain for ever a matter of curiosity rather than an article of general use.

In *Germany* endeavours have been made in the time of ROBERT, and recently in *Styria*, to make silk from the cocoons of the *Saturnia pyri*, a moth which is common in *Austria* and in the subalpine parts of the *Tyrol* and *Switzerland*: but hitherto the experiments have been too few; more particularly, as I heard, on account of the delicate caterpillar, which dies if not fed with the greatest promptitude with the under leaves of different kinds of pear trees.

A discovery, therefore, which promises to prove not so abortive as those now quoted, must be of the greatest importance.

The vast provinces of India are rivalled in variety, preciousness

and perfection of their productions, only by those of the celestial empire. Now in the hands of an enlightened benevolent government, they will probably surpass it in a short time, when its natural resources, daily more conspicuous, shall be discovered, examined, and brought in to general use.

As in *China*, so in India, silk has been produced since time immemorial: not the silk of the later introduced mulberry caterpillar, but the silk from various indigenous cocoons, which are found only and exclusively here.

The first notice of these, but only in a cursory way, has been given by the father of Indian botany, Dr. ROXBURGH, in the Transactions of the Linnæan Society, vol. vii.

He there mentioned only two species, the *Phalena (Attacus) (Saturnia) paphia* and *Phalena cynthia*. Since that time no further attention has been paid to this subject except that Dr. BUCHANAN, in his description of the district of *Dinajpur*, says, that another silkworm is reared on the castor oil plant for the domestic use of the natives.

From the moment of my arrival in India, I had paid an unremitted zealous attention to the productions of Botany and Zoology, and had been so happy to identify in the course of two months, two other species of the genus *Saturnia* which yield silk, one from *Silhet* the other from *Bankoora*. Just at this time Mr. JAMES PRINSEP received from Captain JENKINS in *Assam*, a memoir by Mr. HUGON on the silkworms of that newly acquired, remarkable province, establishing six different kinds of silkworm: the cocoons of four of which are now transformed into silk by the inhabitants of *Assam*, and to my great joy and surprise, I found that three of them are different from the well known *Bombyx mori*, and from the two other indigenous which are worked in Bengal.

These recent discoveries merit particular attention. India has thus the internal means of providing the whole of *Europe* with a material which would rival cotton and woollen cloth, and would be preferred in many cases to both, if brought within the reach of every one by a lower price: and an unlimited resource of riches and revenue might be opened under proper management.

May it be now permitted to me to go through the numerous different species of India which actually produce silk of which seven kinds have never been mentioned before.

1. *Bombyx mori*, the mulberry silkworm, which has been probably introduced as the mulberry seems to be an acclimated plant, is too well known to deserve a particular mention.

2. The wild silkworm of the Central provinces, being described

as a moth not larger than the *Bombyx mori*. I could not yet procure specimens of it: probably there are several species of *Bombyx* confused, as the silk, which sometimes comes in trade, varies considerably.

3. The Joree silkworm, *Bombyx religiosæ*, mihi.—I am sorry to say that the specimens of this interesting moth have been destroyed on their way from *Assam* to *Calcutta*, so that I am obliged to make a superficial description from the accompanying drawing, (Pl. VI.) excluding a diagnostical analysis.

Genus, Bombyx.

Length about $1\frac{1}{4}$ of an inch.

Antennæ, pectinated.

Head, small, covered.

Eyes, very large, brownish black.

Palpi, unknown.

Thorax, subquadrate, covered with thick brownish grey hair, with a black band separating the abdomen from the thorax.

Abdomen, represented as having eight segments?

Legs, unknown.

Wings, upper wings very short (in ♀ imperfect) triangular, with the acute angle outward. The interior side emarginated. Of a light grey color which darkens towards the extremity.

An interrupted whitish band on the lower margin with a large whitish speck towards the ends.

Lower wings uniformly brown.

The cocoon of this silkworm shows the finest filament, and has very much silky lustre. It is exceedingly smooth to the touch and very different from the cocoon of the mulberry tree.

This discovery of Capt. JENKINS is very interesting, as it yields a silk if not superior yet certainly equal to that of *Bombyx mori*.

It lives upon the pipul tree, (*Ficus religiosa.*) Its general introduction would be very easy, as the pipul tree grows abundantly over all India.

Specimens of cocoons sent a second time by Captain JENKINS, convince me that the *Joree* and *Deo-mooga* are the same species.

4. *Saturnia Silhetica*, mihi. (Longitudo pollices novem, sive lineas 108 alarum superiorum expansarum.)

Diagnosis. Pectinicornis, alis superioribus apice recurvata falcatis, inferioribus oblongis. Alis superioribus maculis duabus fenestralibus, internâ triangulari magnâ alterâ externâ multó minori oblongâ, inferioribus maculâ eâdem unâ versus corpus triangulari magnâ. Colore cinamomeis lineis variegater albidis in medio ad marginem externam flavis.

Eggs, larva, and chrysalis, unknown.

Imago. Description.

Head, projecting with a crest of yellow hairs.

Eyes, middle-sized, light brown.

Antennæ, pectinated, about five lines broad, yellow.

Palpi, four, not covering the inner vermilar, brownish colored.

Mouth, hidden, without proboscis.

Thorax, obovate, clothed in a velvet-like purplish fine hair of the same color as the wings.

Abdomen, very short, clothed with much finer and lighter hair than the thorax.

Legs, hairy, yellow, equal.

Tarsi, moderately incurved.

Wings, horizontal expanded, with strong ramifications of the central muscles and tendons.—*Superior pair* of a cinnamon color. The end much curved, the upper margin with a beautiful velvet-like grey belt. Fan edges very much concave, the exterior extremity of a beautiful rose color. The inferior margin darker yellow, with an undulating narrow thread-like black line, losing itself towards the exterior extremity. In the centre is the eye, peculiar to all saturniæ, with micaceous transparency, triangular, with the sharp angle towards the body, another small oblong transparent point behind it, both with a dark brownish margin round it. *Inferior* or *second pair,* in point of distribution of colors the same; in form, much more convex, oblong. The hair very thick and long towards the body, and more particularly towards the point of insertion. The black line is not undulated, but follows the shape of the wing, and has at each side of the projecting tendons two black oblong spots, circumscribed with light yellow.

Habitat in the Cassia mountains in *Silhet* and *Dacca,* where its large cocoons are spun to silk. A particular description of the process is wanted.

5. A still larger *Saturnia,* one of the greatest moths in existence, measuring ten inches from the end of one wing to the other, observed by J. W. GRANT, Esq. in *Chirra Punjee,* seen in the possession of the late Dr. JAMES CLARK. I have not yet seen the animal.

6. *Saturnia Paphia,* Linn. Syst. Nat. 2, p. 809, 4. *Phalæna Mylitta,* DRURY, vol. ii. t. 5, f. 1, Mar. ROXB. Trans. Linn. Soc. vol. vii. p. 33.

The Tussch Silkworm.

It is the most common in use of the native silkworms. The cloth so commonly worn by Europeans also in this country, comes from this species; J. W. GRANT, Esq. had the kindness to procure me, in

the month of September, more than 3000 cocoons, which I permitted to slip out, and had ample opportunity of studying them.

Michael Atkinson, Esq. from *Jangypur* says, that this species cannot be domesticated, because the moths take flight, before the females are fecundated. This is against my experience: I kept them under a musquito curtain to prevent their evasion, there they were impregnated readily by the males, and deposited every where many thousand eggs, and the young caterpillars issued the tenth day. Therefore the fear entertained of the difficulty in this respect seems to be easily overcome.

Hitherto has this silkworm never been reared, but millions of cocoons are annually collected in the jungles and brought to the silk factories near *Calcutta*, for instance *Dhaniakhâli*; but the principal place of their manufacture is at *Bhagelpur*. In other parts as at *Jangypur* the people gather them from the trees and transplant them on the Assem tree, *(Terminalia alata*, Roxb.) which growing near the houses enables them easily to watch the caterpillars, which are eagerly searched out and devoured in the day time by crows, and at night by bats, &c.

The natives distinguish two varieties, the bughy and the jaroo, but they are the same species.

They feed most commonly in the wild state on the bair tree, *(Zizyphus jujuba,)* but like also and indeed prefer the *Terminalia alata* and *Bombax heptaphyllum*.

This is the same moth which is also found sometimes in *Assam* and which Mr. Hugon calls *Kontkuri mooga*.

Though it was known in *Europe* by the publications of Dr. Roxburgh and Dr. Buchanan, that the *Tusseh* and *Arrindy* silkworms are existing and indigenous, yet, strange enough, it was hitherto unknown, (at least with us on the continent,) that for some years past, their silk was only in small quantity exported to *England;* this silk having been considered as an inferior quality to that produced by *Bombyx mori*. The question of the possibility of acclimation of these larvæ in other congenial climates has ex ipso never been raised.

7. Another *Saturnia* distinct from all others (alis inferioribus in caudam desinentibus); it resembles some species which I saw brought from *Seva*, ? *Java*.

I could only procure the wings of this remarkable insect.

The moth comes from the neighborhood of *Comercolly*.

8. *Saturnia Assamensis*, (mihi.)—Long. alar. sup. extensarum 60—65 linear.

Diagn. Pectinicornis, alis superioribus apice acutis subfalcatis, in inferioribus subtriangularibus maculis duabus subcircularibus non diaphanis luteis. Color lateritis—luteus, nebulis sparsis obscuris lineis semicircularibus versus corpus duabus albis fasciâ albidâ brunneâ versus marginem inferiorem.

Eggs, larva, and chrysalis, not seen living, but recognizable in the accompanying drawing. (See *Moonga moth*, Plate VI.)

Head, not projecting, with a tuft of reddish yellow hair.

Eyes, ordinary dark-brown.

Antennæ, pectinated in ♀, broader than usual in Saturniæ.

Palpi, four, covering the mouth which is invisible.

Thorax, square, half oblong, clothed near the head in a silverish grey color, forming a continuity of that in the upper margin of the superior wings, the behind part of the color of the wings.

Abdomen, more than two-thirds of the breadth of both wings in their natural position, likewise of the color of the wings.

Legs, slender, hairy, yellow, short.

Tarsi, slight and incurved.

Wings, horizontally expanded, with a strong tendon directing the membrane of the upper wings in their upper margin.

Both pairs of a dark yellow somewhat reddish color. The end in the male much curved, the upper margin half from the body, of a silver grey color. The exterior extremity scarcely differently marked; a brown slightly undulated band, accompanied on both sides by a white line, extends across the wings more than two-thirds below their insertion on the thorax. Several brown nubeculæ are to be observed between the divisions of each tendon. Two semilunar white lines are to be observed on the upper wings, and are absolutely on the lower ones towards the abdomen; the interior larger, inwards curved; the other shorter, outward bound. The two specks on the wings, peculiar to *Saturnia*, are almost semicircular, but not micaceous, diaphanous; but likewise clothed with yellow squamæ of a darker line (more in ♀) with a brown margin on the inner side. Through this distinguishing peculiarity this insect seems to make a transit to a next genus, though the drawing of the larva represents completely a *saturnia* caterpillar.

The cocoon of a yellow brown color differs in appearance from all the others.

We are indebted for the discovery of this very interesting insect to Captain JENKINS and Mr. HUGON. Its particulars are extensively described in Mr. HUGON's memorandum. This species has never been mentioned before, though the fabrication of silk from it seems to be very common amongst the Assamese.

9. *Phalæna Cynthia*, DRURY, 2, t. 6, f. 2. Cram. 4, t. 39, f. 4. ROXB. Linn. Trans. vol. vii. p. 42. BUCHANAN, Desc. Dinájpur, p. 214.

(BUCHANAN quotes it as *Phalæna Penelope* unde ?)

The *Arrindy Arria*, or *Eria* silkworm (Pl. V.) is reared over a great part of Hindustan, but more extensively in the districts of *Dinájpur* and *Rangpur*, in houses, in a domesticated state, and feeds chiefly on the leaves of *Ricinus communis*.

The silk of this species has hitherto never been wound off, but people were obliged to spin it like cotton.

"It gives a cloth of seemingly loose coarse texture, but of incredible durability; the life of one person being seldom sufficient to wear out a garment made of it, so that the same piece descends from mother to daughter."—(*Atkinson's letter to Roxburgh.*)

It is so productive as to give sometimes 12 broods of spun silk in the course of the year. The worm grows rapidly, and offers no difficulty whatever for an extensive speculation.

On account of the double profit which would be derived from the same area of land cultivating it with castor-oil plant, which produces oil and feeds the worm, an extensive cultivation of this species would be highly recommendable; and if also the cloth is of the coarsest nature, it is, on the other hand, very valuable on account of its durability. May it not be particularly well adapted to mix it in certain textures with cotton ?

It is likewise an inhabitant of *Assam*, and Mr. HUGON's observations about this species form an interesting paragraph in his memorandum.

10. *Saturnia* (?) *trifenestrata*, mihi.—Longitudo lineas 24—28. *Diagnosis*. ♀ obscure castaneo brunneâ versus finem albido adspersâ, lineâ transversali albidâ, alis superioribus ad marginem externam fenestris tribus transparentibus lineâ diagonali versus corpus currentibus.

♂ luteus lineâ brunneâ transversali transversè super alas currente, alæ superiores margine externo fuscescentes.

Eggs, whitish-yellow; indented 1 line on the longer circumference.

Larva, unknown.

Chrysalis, unknown, (damaged.)

Cocoon, yellow, in a network, transparent, so that the cocoon in the inside is to be seen, of a remarkable silky lustre.

Imago. ♀ of an uniform brown color; towards the end of the wings the like with white flower powdered. An obsolete whitish line runs transversely. The most remarkable in this insect are three glass eyes on the upper wings, beginning from the tendon of the insertion lower than the middle of the wing, and running one behind the other inwards

towards the extremity of the body. The first looks like two, which run together, the second is the smallest.

f of a uniform yellow color, only the outward margin of the wings is brownish, and a transversal line turns over the wings. The glass eyes are wanted, one of the three is a vestige, instead of the two others are two brown spots to be observed.

In those specimens which I saw were gradual transitions from dark brown to light yellow in different individuals to be observed, but always were the females much darker.

This is likewise a valuable discovery of Captain JENKINS in *Assam*, where it lives on the soon tree, but seems to be not much used.

11. HENRY CREIGHTON, Esq. of *Malda*, mentions another silkworm :—

"There is a cocoon produced wild upon the mango tree, which the people of *Malda* gather and mix with *Arrindy* cocoons in spinning." This species seems to have remained hitherto unobserved.

There is no doubt, that in India exist some more insects, which furnish this precious material. The repeated and so often frustrated endeavours of ingenious men in *Europe* would certainly find in India an ample and highly remunerating field in this branch of speculation.

It would be very interesting to collect all moths which form cocoons, amounting, to judge by analogy, probably to upward of 150 species, to watch their natural economy, and to send specimens of each cocoon to Europe, to be there attentively examined.

Many have made the objection that the silk of the Indian species is much inferior.

This is yet an undecided question. The mulberry silkworm degenerates if not properly attended to. What has been done to raise the indigenous species from the state of their natural inferiority? Very much depends upon the cultivation of the worms in houses; 2, the method of feeding them, selecting that vegetable substance, not which gratifies the best their taste, but which contributes to form a finer cocoon: and 3, from the first chemical operations employed before the working of the rough material. But even if the raw material would not be capable of a higher degree of cultivation, the demand for it would, notwithstanding, never cease in *Europe*. All silk produced in Hindustan has hitherto found a ready and profitable market in *Calcutta*, and the demand is always greater than the supply. And that really the roughest stuff of the *Arrindy* silkworm is appreciated in England, may I be permitted to conclude the present article with the following fact.

Mr. JOHN GLASS, the Surgeon of *Baglipur*, sent, in the beginning of this century, some of the *Arrindy* silk home, and he wrote:

"I understand that some manufacturers to whom it was shown seemed to think that we had been deceiving them by our accounts of the shawls being made from the wool of a goat, and that this silk if sent home would be made into shawls equal to any manufactured in India."

This will be sufficient to show the importance of this article, and that it merits highly the attention of the paternal Government of India, and of all patriotic institutions, particularly of the Asiatic Society in *Calcutta*, which has done hitherto so much for the promotion of science and knowledge, and consequently for the welfare of all nations.

V.—*Concerning certain interesting Phenomena manifested in individuals born blind, and in those having little or no recollection of that sense, on their being restored to sight at various periods of life. By* F. H. BRETT, *Esq. Med. Serv.*

When the profound and discerning Mr. LOCKE in his Essay on the Human Understanding asserted that ideas were not innate, he meant, no doubt, that so far as the mind's intercourse, in its present condition, with all objects submitted to it was concerned, its noble faculties were destined to be educated only by its legitimate objects of excitation through the medium of the senses appointed for that purpose. His eccentric comparisons of the mind to a dark room, a blank sheet of paper, &c., meant in reality nothing further.

It occasionally happens that in the course of very extensive practice we have opportunities of illustrating this, in cases of restoration to sight of persons born blind, and also in cases of individuals who have known and distinguished colors; and "then (as Mr. LOCKE expresses it) cataracts shut the windows," and if restored to sight many years afterwards, they are in precisely the same situation as though they had never seen before, having not the slightest recollection or idea of colors any more than the individuals born blind. All is to be acquired "*de novo.*"

I will particularize the following from amongst several which have occurred to me, as they may probably appear interesting to the Society when divested of all purely professional or surgical detail, which have already indeed been communicated to the profession.

No. 1.—The following is illustrative of the fact of all ideas of objects and colors having to be acquired, as well as a verification of the problem

contained in the 8th Section of the 2nd Book of Mr. LOCKE in his chapter on Perception. "Suppose a man born blind, and now adult, and taught by the touch to distinguish between a cube and a sphere of the same metal, and suppose the cube and the sphere placed on a table, and the blind man be made to see; (quære: whether by his sight before he touched them he could now distinguish and tell which is the globe and which the cube?) to which the acute and judicious proposer answered—No."

A pandit, 18 years of age, native of Saugor, was born blind; his mother states that she had kept him in a dark room until the 10th day of her confinement, when on taking him to the door and exposing his eyes to the light, she discovered the pearly appearance of the pupils peculiar to cataract, and that he has always been blind. He is intelligent and cheerful, and has been in the habit of finding his way about Saugor and the adjoining country for many years, frequently singing, of which he is very fond. He had little or no inclination to undergo the operation,—at least not sufficient to overcome the fear which he entertained. He could perceive the light, and had acquired the habit of rotating the head constantly in progression in a regular and curious manner to the right and left, with a view, I imagine, of admitting the light to the retina obliquely between the circumference of the cataract and the under edge of his iris. It was a long time before his relations could persuade him to submit to an operation. He had requested to be taken to me some months previous; was gratified at being told that he might be made to see like other people; but the slight inconvenience attending the introduction of a few drops of the solution of belladonna into the lids, and my holding the lids to try how they should be supported, annoyed him—and he said he would much sooner go home and eat his dinner. "What do I want with being restored to sight?" His mother likewise expressed her disbelief as to a person born blind being made to see. The principal pandit of the *muhallah* at length overruled the objections. The operation was performed on the 28th of August. He complained of but little pain, and indeed there was scarcely any inflammation whatever produced by the operation. He immediately became conscious of a considerable increase of light.

The eye-balls, as in all cases of congenital cataract, moved about without any control, which, together with a very prominent brow and much spasmodic action of the lids, offered some obstacles. So little irritation had occurred, that I operated on the 30th August on the left eye, which resembled the former operation in every particular. No inflammation followed, but the right eye had become inflamed, in

consequence of which his eyes remained bandaged for several days, and it became necessary to bleed him. He expressed himself as sensible of a remarkable change having taken place: the light was most distressing to him, and continued so for some time. On the eighth day the absorption had proceeded very satisfactorily: several substances of various colors were presented to him. He could not recognize any of them, until he had made himself acquainted with them by the sense of touch. He brought them very close to his eyes, moving his head in his accustomed peculiar manner. Whatever he attempted to reach, he always missed his aim. He expressed himself as highly gratified, and confident that he would see and know every thing, but did not like too much interrogation. On the 12th day he came to me again. The eye-balls were no longer rolled in their former vacant manner. He had acquired the power of directing the left eye, which had been most instructed, on objects; the right eye, from inflammation, having remained bandaged. A lady shewed him her shawl: he said it was red, which was correct; but did not know what it was, until examined by the hand. The platform in front of the house was recognized as green, and his mother said he had been examining many things at home. The absorption of the cataract has proceeded, leaving two-thirds of the pupil of the left eye quite clear; some inflammation still in the right. He said he was no longer afraid of me, and that he would submit to any thing I recommended. On the 16th of September he walked from the town to see me, accompanied by his mother. He had gained much information during his absence. The pupil of the left eye had become almost entirely clear. He said he had seen a great number of trees on the road, the lake, and a buggy passing by. He had made himself acquainted with several things. What is this?—A lota. This?—A pawn leaf. Which answers were correct. A small hooka was shewn him: he touched it, and was told what it was; several things were then presented to him and the hooka was again brought. He observed, "I cannot tell; you have submitted so many things to me, that I am confused, and forget their names." He felt it and then exclaimed, it is the same hooka. Presently it was shewn him a third time; he recognized it after having carefully viewed it from top to bottom without touching. He observed a book, remarking that it was red; but he knew not that it was a book until told so. It was presented to him a few minutes afterwards, and he recognized both the color and the book. He said he was extremely happy and gratified with all he saw. He followed me with his eyes as I moved about the room, and pointed out the different positions I took. He

recognized distinctly the features of his mother's face. She hid it under her chadder; he laughed, and observed that she had done so, and turned his face away. He said, "I can see every thing; all I want more, is time to learn what they all are; and when I can walk about the town, I shall be quite satisfied." He could not ascertain whether any thing was round or square, smooth or rough. He distinguished the following: some partridges, the cage and the cup containing the water. The color of their plumage he correctly stated; also the windows, the fields, the sky, a child in arms, &c. On the 7th he again came to see me. He pointed out every feature in his mother's face, her hair, the color of her dress, the different distances and positions which she purposely took, and when changing places with another woman, selected her out. He stated that if I would bring the red book I shewed him yesterday, he would recognize it. I accordingly brought him a red morocco box much resembling the book, but smaller; he said it was the book! At this period his knowledge of the shapes of bodies and their sizes was very imperfect, especially the latter. He directed his hand straight to whatever things were now presented before him. The last time I saw him, a small ivory looking-glass, a paper-cutter, and a cut jelly-glass, were placed on the ground; they were shifted and changed, and he distinguished each respectively. He was much amused and laughed heartily. I gave him the looking-glass, in which he noticed his face, and said it was like other people's, *achchha*.

It will appear, therefore, that his judgment of distances, colors, notions, and positions, was very considerable. That of size and form was to be acquired more tardily.

From this period I quitted Saugor, and have heard nothing further of him.

No. 2.—The next is a similar instance of an individual who had never seen before,—a Brahman boy of 10 years of age, residing at the *Kherie Pass*, near the *Dehra* valley.

A few days after the first operation when the bandages were removed, the principal circumstance worthy of note was the confusion and embarrassment of the mind, arising from new and unaccustomed impressions and the dazzling influence of light.

On the seventh day he had acquired some voluntary power over the ball of the eye, being able to steady it somewhat, and fix it on any object he wished to discern, but only for a few moments. He had after repeated practice acquired a knowledge of most colors, but it was not until the twenty-sixth day from the first operation that he could be said to have a tolerable acquaintance with the visible world. Dur-

ing this period, when the absence of pain and inflammation permitted, (for it was necessary for him to undergo several operations,) the bandages were removed before and after sunset, and his attention was directed to men sometimes standing, sometimes moving; also to the tent, sky, trees and their foliage, animals of different kinds, the colors and figures and motions of which he was able in time to discern.

There was no correspondence, however, for a long while between the sight and touch, neither did he for several days direct his eyes straight to objects so as to examine them minutely. At night he would contemplate the stars, and the flame of a candle, and the features of my face, &c. Debility, the necessary result of the treatment, &c. in a delicate frame, was one cause of the slowness of progress. As he gained strength by an improved diet, his vision greatly improved.

He was observed to take up various objects and notice them; latterly I was in the habit of calling him into my tent when at breakfast. He noticed the cups and saucers and their patterns; chintz on the canvas; and he observed attentively a hooka, describing the bell (cut glass) as bright; noticed the snake, and mouth-piece (silver), and saw distinctly the smoke ascending.

On the 20th of December he walked several yards without assistance. A lady gave him a colored chintz cap, with which he was much pleased, and he distinguished on it the colors of green and red, and the white ground. As his new sense could scarcely be said to have been exercised more than fourteen days, further observations could not be made as to his judgment of distances, positions, forms, and motions.

No. 3.—A similar result, as far as phenomena, occurred in a boy of 12 years of age, though his acquirements were more rapid, from his natural mental intelligence being superior to the former cases: the cause of his blindness was disease after birth from the small-pox. The nature of the operation being the formation of an artificial pupil at the outer corner of the eye, it is unnecessary to repeat the details which are so similar to the preceding, and though he had seen for some weeks of his early existence, of course he had to acquire all '*de novo*.'

No. 4.—There are others who have been restored to sight who had lost it at a more advanced period of life—say five or six years of age and upwards, and when restored exhibit peculiar phenomena more or less interesting in proportion to the degree of remembrance they may possess of their former vision. And this was particularly remarkable in a young man of 25 years of age, the brother of the boy mentioned in case No. 2, who had become blind when only 5 years

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old; and which is remarkably interesting in a physiological point of view, as shewing the power of the retina to preserve its susceptibility to light for twenty years, though not the only case recorded. There was certainly in this case a great approximation to the phenomena manifested in congenital blindness, but there was not that marked ignorance in recognising objects at first sight, nor that palpable want of correspondence between the touch and sight, but both existed to some extent. It was also curious that he should become blind after five years of the same disease with which his brother was born blind.

I recollect restoring a man, aged 35 years, who had been blind for a period of twelve years from the venereal disease, causing closure of the pupils. This man, after an operation for artificial pupil, recognised, of course, every thing perfectly the moment he was permitted to look about him, and still enjoys a very tolerable share of vision at *Cawnpore*.

VI.—*Memorandum of the progress of sinking a Well in the bunds of Chandpur, near the foot of the Hills. By Mr.* WILLIAM DAWE, *Conductor, Delhi Canal Department.*

In sinking wells through the soils, without and within the lower range of hills, I have seen repeated failures owing to the usual mode adopted in digging for the water, (i. e. with perpendicular sides;) and as I was only about 400 yards from a branch of the *Jumna*, the level of its water about 14 feet below the surface of the top of the proposed well, I calculated upon finding water at 20 feet deep at the utmost. I therefore commenced digging 42 feet diameter, contracting as I sunk, and this admitted of leaving a couple of winding steps to bring up the contents by basket loads, in preference to being drawn up with a drag-rope, (which method could not well be adopted, the top excavation being so wide.) At the depth of 24 feet I was apprehensive that the work would have been a failure, owing to the vast accumulation of heavy boulders, from 4 to 10 maunds weight, which I had no purchase to get up. This obstacle was got over by the simple method of expending one for every step of the winding roadway, always taking the precaution of letting the boulders sufficiently into the bank to prevent the possibility of their falling down on the work-people below. By this method down as deep as 37 feet the boulders were expended as we came on them, and as the soil there had a more favorable appearance for working, and there was a probability of soon getting water, and the space had become so contracted,

I was obliged to commence sinking perpendicular, which was carried on till we at length found water at 72 feet deep. The boulders found in the latter part of the work were only few, but they were of the largest size, and those were got rid off by excavating recesses in the sides and depositing them therein. The above excavation down to 72 feet was completed for 120 sicca rupees.

Part of the cylinder having been built, it was sunk in June, where I found the water had sunk 7 feet 6 inches lower. We sunk further 14 feet, when we got to a bed of clear pebbles, and bedded the well ring on small boulders, with 6 feet 6 inches water; and as the driest season has arrived, we may expect always to have a plentiful supply of good water from a total depth of 86 feet below the surface.

MEMORANDUM OF THE SOIL IN THE CHANDPUR WELL.

Feet 1.	Clayey soil.
2 to 7.	Light soil, consisting of clay and sand, the proportion of sand increasing with the depth.
8.	A vein of sand.
9 to 11.	Sand with slight mixture of clay.
12 to 14.	Fine sand.
15.	River sand.
16.	Coarse river sand.
17.	Ditto ditto, with gravel and small boulders.
18.	Large gravel and boulders.
19 to 25.	Ditto ditto, some of the boulders very large.
26 to 27.	Ditto ditto, large boulders, with a mixture of clay.
28 to 30.	Ditto ditto, with a layer of immense boulders.
31 to 32.	Ditto ditto, and small boulders through which a spring of water has passed, shewn by the stones being without a particle of sand mixed with them.
33 to 36.	Large gravel with large boulders.
37.	A vein of old spring, as above.
38.	Gravel with small boulders.
39.	A vein of river sand with a mixture of small stones.
40 to 41.	Gravel with large boulders.
42 to 46.	Large gravel with small boulders.
47 to 48.	A vein of old spring—small boulders.
49 to 54.	Gravel with large boulders.
55 to 56.	Vein of river sand, slightly mixed with gravel.
57 to 64.	Gravel with small boulders.
65 to 66.	A vein of fine river sand.
67 to 69.	Gravel with no boulders.

70 to 72. Vein of fine river sand—(water found here).
73 to 76. Fine sand, with a mixture of clean gravel.
77 to 79. Gravel with a mixture of yellow sand.
80 to 83. Clear fine river sand.
84 to 86. A bed of clean pebbles, and the well ring bedded on small boulders.

N. B. The water sunk while the cylinder was being built to 79-6.

Note by Lieutenant W. E. BAKER, *Engineers, Assistant Superintendant of Canals.*

The situation of this well is close to the southern base of the outer range of hills, where they fall away into the valley of the *Jumna*, a branch of which now occupied as the bed of the *Delhi* canal, passes within a short distance of it. The strata, of which the section is thus exhibited, are evidently the deposits of a stream, having, for the greater part of the time, at least as strong a fall and as rapid a current as the *Jumna* at the same spot now has—and they are precisely what might now be forming in the *Jumna*, were that river raising its bed—even the strata of small rounded stones, in which Mr. DAWE has attributed the removal of sand and smaller gravel to the action of formerly existing springs, have their representatives in the numerous shingle banks of the *Jumna*.

The most striking circumstance, however, illustrated by Mr. DAWE's observations, is the impermeability of these river deposits to the water of the neighboring channel, the stream of which is never dry. This circumstance was even more strongly exemplified in the same vicinity—at the village of *Rayanwalla*—where, within the inclosure of the canal chowkey, and not 60 yards distant from the water's edge, it was desired to sink a well to supply clear water to such of the establishment as remained there during the rainy season, when the river water is turbid and unwholesome. The shaft was of small diameter, as water was confidently expected at but little below the level of that in the canal: no trace of it, however, was met with to the depth of 60 feet—when, from the smallness of the shaft, it became dangerous to proceed further; the attempt was therefore abandoned and the shaft filled up again. The strata pierced through on this occasion consisted of large and small boulders, gravel and sand materials, of which we find it impossible to form a dry bund, even where the difference of level is only 2 or 3 feet—while here, the excavation must have gone at least 50 feet below the canal level.

In apparent contradiction to this, is a well known fact, connected with the rivers flowing through the northern parts of *Rohilkhand* into

the Ganges. I mean the disappearance from the surface, near where they leave the outer range of hills, and then again emerging at the distance of 10 or 12 miles lower down; thus shewing the complete permeability of the gravel beds through which they must be supposed to trickle—and that this is in some measure the case in the *Jumna* also, is rendered probable by a circumstance which came under our observation in the great drought of 1833-34.

In order to supply the excessive demand for water for irrigation, it became necessary to throw a gravel bund right across the *Jumna*—just below the head of the canal; and at this very period, as appears from a record kept in the Executive Engineer's Office at *Agra*, a slight diminution only of the waters of the *Jumna* at that place was observable.

VII.—*The History of Labong from the Native Records consulted by Dr.* D. RICHARDSON, *forming an Appendix to his journals published in the preceding volume*.*

The annals of *Labong* reach back to the same remote and fabulous period as those of the neighboring nations. In the year 1118, (A. D. 574,) after GAUDAMAH had obtained *nib-ban*, or eternal rest, two holy men, WATHOO-DAY-WA† and TUKA-DANDA, (having first buried a shell with the spiral turned the reverse way,) by prayers and holiness raised from out the earth the walls, gates, and ramparts, and sunk the fosse of *Labong*. They marked the site of the pagoda, and during two years employed themselves in calling together the people from the surrounding forests and small villages. In 1120 they raised to the throne RAMA or ZAMMA-DAY-WE, daughter of the king of *Chandapur* (or, *Wintian*, the capital of *Saroarata-ty-ne*), and widow of a prince of *Cambodia*. She had twin sons, MAHANTA-YATHA. The elder succeeded her in *Labong*, received the common title of "SEN-BUR SHEEN," or Lord of the White Elephant, for having caught one of that color. AINDAWARAJA, the younger, built and reigned in *Lagon*. In *Labong* (the Magadharrame of which is HARI-BOUNG ZAYATYNE) from RAMA-DAY-WE to ADUTZA-WOON-THA, who built the pagoda *(assein dayá)* there reigned 35 kings, and from ADUTZA-WOON-THA to BENYA-THEOHA 19; in all 54 kings reigned in *Labong*. BENYA-MEN-YEA, called in *Ava* History DOLANA BENYA-TSO-MEN-YEA, the son of BENYA-THOOHA, succeeded him, and reigned ten years in *Labong*,

* We have already quoted from this document in manuscript; see Appendix General Tables, page 135.—ED.

† *Vasu-deva*?—ED.

three in *Kim-yea*, five in *Wen-congkan*. In 651* he crossed the Thaluen river, and married a daughter of THOOTHA THOMA, king of *Pegu*, with whom he received in dower four hundred Taliens or Peguers and their wives, the town *Yain Salen* and its dependencies, and returned to his country; and on Thursday the full moon of Kasong, (May,) 656, at midnight, founded *Zama-pada-pur-there-nagara-nawara-raza-tani*, or *Zimmay*, measuring from east to west five hundred tals†, from north to south four hundred and fifty tals; built his palace of *Zayaboungme*; reigned thirty-seven years; in 623 died, aged eighty, and was succeeded by his son NGATHEN-POOTCHOO, who in 695 was succeeded by his son TSO-TCHOMTA-YUNG; and he in the same year by his son NA-TCHOON-TARCUNG; and he in

698 by his son NGA-THENPOO; and he was succeeded in
707 by his son TSO-KANPEW; he in
709 by his son TSO-BOA-YOU; and he in
731 by his son GOONA; and he in
739 by his son-in-law GNATHENMIMA; and he in
742 by his son THAMBI; and in
782 his son TSO-BENYA succeeded; and in
817 his son TSO-NEAT succeeded; and in
825 his son BENYA TSOTHEE, called also *There-tha-da-matilanka-seek-ka-wa-te-ya-za*; in
865 his son TSO-MYNEAE succeeded; and in
899 his son BENYA TSAY; in
904 his son TSO-MYNE; in
906 his daughter ZALA-PABA, called also *There-thadama-maha-day-we*.
920 SEN-BUE-MYA-SHEEN, king of *Pegue*, took the town, but allowed the queen to enjoy the revenues with the royal title till her death, when he gave the town and revenue to his son NARATA-TSO, the *myo-tsa*, (literally, town-eater: the person who enjoys the revenue of a town amongst the Burmese is so called). SARAWADI, in the

* To account for the discrepance in the dates of *Labong* and *Zimmay*, it is to be stated that the common era has been twice altered; once 624 years after the death of GAUDAMAH, by THERE MOUNGDARI, king of *There*; KIT-TARA, who dropped 622 years, and commenced from 2. The second alteration was made by THENGARET, king of *Pagan*, in the seventeenth year of his reign, 562 years from the reign of THERE MOUNGDARI, who dropped 560 years, and again commenced with 2. *Labong* was founded 1118 years after the death of GAUDAMAH; and *Zimmay* 656 years after the alteration of THENGARET, or 1838 years of the death of GAUDAMAH; giving a period of 720 years to 54 kings, and average of thirteen years and some odd months and days to each reign. (See Chron. Appendix, page 84.—ED.)

† The tals, is seven cubits.

year 990, after the death of SEN-BUE-MYA SHEEN, the chief of *Moung-nam*, rebelled in *Zimmay* and shook off the Peguan authority; and in 992, THA-DAN-DAMA-YAZA, the grandson of SEN-BUE-MYA-SHEEN retook it. 1125, *Tso-oung* recovered its independence, which it enjoyed only a short time, when it was taken by SEN-BUE-SHEEN, king of *Ava*, son of the great ALOMPRA. 1136, BENYA-SA-BAN, and KAWEELA, the eldest brother of the present *Chow-tchee-weet* of *Labong*, who was *Myo-tsa* of *Lagon*, rose against THA-DAN-MENDEU, called by the Shans *Bogoung-bue*, (a white-headed chief.) The Governor of *Zimmay* under SEN-BUE-SHEEN again prevailed and transferred their allegiance to *Bankok*, to which they have continued subject ever since. KAWEELA had six brothers, three others of whom have received from the king of *Bankok* the title of "Chow-tcha-Weet," or "Lord of Life," one of the many titles he himself enjoys, and the other three have been Chows Moungs of the other towns. The present Chow-tcha-Weet, who is now seventy-two years of age, is the youngest and last of the seven brothers. He has five children by his first chief wife, viz. the wife of CHOW HOUA of *Labong*; the wife of a chief who is at *Bankok*; CHOW RAJA BOOT, the eldest son; another daughter who is deranged, but quiet and inoffensive. CHOW HOUA of *Labong* will probably succeed to the *zazabolenoe*. He is certainly, from his intelligence and habits of application to business, incomparably best fitted to do so. But it is the opinion of the northern Tsoboas that the CHOW HOUA of *Zimmay*, who is even now little inclined to submit to the old Tsoboa's authority, will not quietly acquiesce, and that at the death of the present Tsoboa there will be some bloodshed in the country.

VIII.—*Suggestions on the Sites of Sangala and the Altars of Alexander; being an extract from Notes of a Journey from Lahore to Kurachee, made in* 1830. *By* C. MASSON.

"At length after a long march we arrived at *Harreepah*, having passed the whole road through close jungle. East of it was an abundance of luxuriant grass, where, with many others, I went to allow my nag to graze. On rejoining the party, I found it encamped in front of the village and an old ruinous castle attached to it. Behind us was a large circular mound or eminence, and to the west was an irregular rocky height crowned with remains of buildings, shewing fragments of walls, with niches in them. This elevation was undoubtedly a natural object; the former, being of simple earth, was probably artificial. On going to examine the remains we found two immense

circular stones with large perforations, which we were told were once worn round the ancles by a celebrated fakeer, who resided here, and who among other proofs of mortification and sanctity, accustomed himself to eat earth and other strange substances. Between our encampment and this natural height was a small space of jungle, in which are a few *pipal trees* in the last stage of existence. The old fort, an erection of other days, is built with burnt bricks; its walls and towers are very high, and its extent considerable, but time has made evident ravages in its defences: its bulwarks have in many places tumbled down, and it is no longer occupied. Surrounding the north-east angle of the fort, is a small swamp. We were cautioned by the inhabitants, that we should be much annoyed by a species of gnat, called *muckah*, which swarm by night in these jungles during the rainy months, but which we had not hitherto seen. To avoid these, we decamped towards evening, and fixed ourselves on the summit of the circular artificial mound before mentioned.

It was impossible to look upon the prospect of the fort and swamp before us, and beneath our feet, upon the ground on which we stood, without feeling the conviction that we were beholding the fort and lake of *Sangala*, and that we stood on the eminence protected by the triple lines of chariots, and defended by the *Kathæi*, before they allowed themselves to be shut up in their fortress.

The evidence of ARRIAN is very minute as to this place, and he furnishes excellent data which cannot be mistaken in their application. While ALEXANDER was proceeding to occupy the kingdom, abandoned by its monarch the second PORUS, he received intelligence that the Kathæi, the most warlike of the Indian nations in those parts, in confederacy with others, probably the Malli and Oxydracæ, had collected their forces, and resolved to oppose his progress, if toward them directed. As the occupation of an undefended country presented no field for achievement or glory, he dispatched HEPHESTION to effect its settlement, and marched direct against the Kathæi. At the period of receiving tidings of the hostile attitude of these Indians, ALEXANDER had crossed the Acesines, and was marching towards *Lahore*, if we credit the inference that this city represents the capital of the fugitive PORUS. He diverged to the south, and having crossed the Hydraotes or *Ravi*, on the first day arrived at *Pimprama* (possibly *Pind Brahma*, Brahma's or the Brahman's village) at which he halted the second, and on the third reached *Sangala*, which ARRIAN describes as a city with a fort built of brick, at one extremity of which was a lake, not containing much water. He farther informs us that ALEXANDER found the Kathæi drawn up on the summit of an eminence

opposite their fort, which was not very high or difficult of access; this they had fortified with a triple row of chariots and waggons, placing their tents in the middle. ALEXANDER successively stormed the barriers of wheeled carriages, and the Kathæi sought refuge within the walls of their fortress. Around this he then drew an intrenchment, except at the point where the lake intervened, the bank of which he secured by lines of waggons he had captured, and there stationed a strong division of troops under PTOLEMY to intercept the flight of the garrison, which he naturally concluded, when driven to extremity, would attempt to escape that way—the depth of water, in what ARRIAN calls a lake (or it may be his translator) being, as he himself assures us, inconsiderable. ALEXANDER having completed his line of circumvallation and other precautionary measures, advanced his engines to the assault of the walls. The terrified garrison, as anticipated, by night attempted to pass the lake; their progress was intercepted, and they were driven back with immense slaughter. The operations of the siege continuing, the towers of the fort were overthrown by mines, and it was finally carried by assault.

In the present *Hurreepah* we are able to recognize every feature which ARRIAN so distinctly points out—the fort built of brick, the lake, or rather swamp of water, and the eminence or mound opposite the fort—this last is wonderfully convenient for the mode of defence the Kathæi adopted, from the gentle slope of its sides. Moreover, a trench still exists between the mound and the fort and parallel thereto, which may plausibly enough be ascribed to the line of circumvallation raised by the Macedonian engineers.

With respect to the present fort, however ancient it may be, it is not of course the identical one that was besieged by ALEXANDER, and which ARRIAN informs us was razed to the ground—but in all probability it occupies the precise site, and may be built with the materials of the one sacrificed to Grecian resentment.

It is necessary to state with regard to *Hurreepah*, that native tradition assigns to the spot the commencement of a large city, which extended as far as *Chichee Wutnee*, twelve coss southward—the period of its existence so remote, that it is not known whether the Hindu or Muhammedan religion was then professed—and that it was destroyed by an immediate visitation of Divine anger, excited by the crimes of the sovereign, who appropriated to himself the wives of his subjects. The eminence, so often noted, is covered with fragments of bricks and earthen-ware, as is the entire neighborhood of the place. Accident prevented me from observing if any remains of buildings were discernible in the next march we made to *Chichee*

Wutnee, as we travelled by night—but I conclude not, as nearly the whole road led through marshes.

The identification of ARRIAN's *Sangala* would not be merely curious as a point of illustrative geography, but of importance as directing us to the spot where ALEXANDER's operations ceased on the banks of the Hyphasis, and affording a better clue than we were hitherto acquainted with for the detection of the site of the famous altars erected by the illustrious Greek as lasting monuments of his progress and victories. Various have been the inferences drawn as to the position of these celebrated structures—but I hesitate not to suggest that they were erected on the banks of the modern *Gharra*, composed of the united streams of the *Beyah* and *Sutlej*, and at that point or nearly where a direct line drawn from *Hurreepah* would meet the river,—that is, (if there be faith in modern maps,) in that portion of it which divides the Sikh and Bhawelpur territories. ARRIAN describes *Sangala* as two marches from the Hyphasis, and *Hurreepah* is distant from the *Gharra* eighteen or twenty coss (27 or 30 miles). It is impossible not to admire the correctness of ARRIAN in his relation of ALEXANDER's progress in the *Panjáb*, and I feel confident, that had I been fortunate to have had him for a companion when a wanderer in that country, the vestiges of his altars, if any remain, might have been detected. PLINY and, I believe, STRABO, have placed them on the eastern bank of the Hyphasis: this, if correct, will not affect general circumstances of locality.

The ancient name *Sangala* appears a composition of *sang* and *killah**, or literally, the stone fort, and figuratively applied to any strong fort, owing to position, construction or otherwise, without reference to the materials of which it may be built. The modern name denotes in Hindí, the green town, and would seem to refer to the luxuriant pastures to be found east of it.

The learned WILFORD has accused ARRIAN of confounding *Sangala* with *Salgeda*, which he says still exists near *Calanore*, and agreeing minutely with the historian's description. *Sangala* he describes as situate in a forest, and sixty miles *west* by *north* of *Lahore*. *Hurreepah* is also situate in a forest, or intense jungle of small trees and bushes, but is south-west of *Lahore*, and at a somewhat greater distance than sixty miles. The fortress of *Sangala*, so particularly described by ARRIAN, must clearly by deduction have been south of *Lahore*, and, as it was only two marches from the *Hyphasis*, could never have been the *Sangala* of WILFORD to the north-west of *Lahore*.

* This derivation from Persian and Arabic is, we fear, hardly admissible.—ED.

This site deserves farther attention, as we find that *Sangala* was, subsequent to its destruction by ALEXANDER, re-edified under the name of *Euthydemia*, in honor of the father of the reviver—but who this reviver of *Sangala* may have been, whether DEMETRIUS, MENANDER, or APPOLLODOTUS, has not been determined by the few who have bestowed attention on this obscure but highly interesting portion of ancient history.

IX.—*Chinese Account of India. Translated from the Wän-hëen-t'hung-khou, or "Deep Researches into Ancient Monuments;" by Ma-twan-lin; book 338, fol. 14.*

[The great interest which now prevails respecting the middle age of Indian history, persuades us to transfer to our pages the following article from the London Asiatic Journal for July, August, 1836. The author or translator's name is not given.—ED.]

Tëen-choo (or India) was known in the time of the latter Hans; the country was then called the kingdom of *Shin-too**.

Note of the Chinese Editor.

[Chang-këen, when first sent (B C. 126) into Ta-hea (or Bactriana), saw stems of bamboos, as in the Shoo country (modern province of Sze-chuen). He inquired how they obtained these bamboos; some men of Ta-hea replied: "Our merchants procure them in the markets of the kingdom of Shin-too, which is Tëen-choo. Some call this kingdom Mo-kea-to†; others name it Po-lo-mun (country of the brahmans); it is situated to the south of the Tsung-ling‡ (or Blue Mountains), distant some thousands of *le* to the south-east of the Yuĕ-che§ (Massagetæ, or Indo-Scythians).

This country is about 30,000 square *le* ‖ in extent; it is divided internally into five Indias; the first is termed Middle or Central India; the second Eastern India; the third Southern India; the fourth Western India; and the fifth Northern India. Each of these divisions of the territory contains several thousands of *le;* and fortified cities, surrounded with walls, and towns of the second order, are placed a few hundred *le* apart.

Southern India is bounded by the Great Sea (the Gulf of Bengal); Northern India is situated opposite to the Snowy Mountains¶; on the

* In Sanscrit सिन्धु, *Sindhú*, Hindustan. † मगध *Magadha.*

‡ A chain of mountains to the north of Cashmere, which separates Eastern Turkestan, or Little Bucharia, from Great Bucharia.

§ M. RE'MUSAT has given a translation of Ma-twan-lin's account of the Yuĕ-che in his *Nouv. Mélanges Asiat.* t. i p. 220.

‖ According to Dr. KELLY *(Orient. Metrol.*, p. 64), 200 *le* are equal to one degree of the meridian = 69·166 English miles; whence 30,000 *le* will give about 10,375 English miles.

¶ *Seuĕ-shan*, an exact translation of the Sanscrit हिमालय *Himálaya*, 'abode of snow,' or rather हिमालयगिरि *Himálaygiri*, 'mountain whereon the snow rests.'

This division of India must include the modern Cashmere, the description of which, by MASU'DI, the Arabian historian, coincides in a striking manner with that of the Chinese author: "The kingdom of Cashmere," he says, "which forms part of India, is surrounded with very high mountains; it contains a prodigious number of towns and villages; it can be entered only by a single pass, which is closed by a gate."

four sides, there are mountains sloping to the south, and a valley which crosses them forms the gate (or entrance) of the kingdom. Eastern India is bounded on the east by the Great Sea, as well as by Foonan (Pegu) and Lin-e (Siam), which are separated only by a little sea. Western India adjoins Ke-pin (Cophenes) and Po-sze (Persia)*; Central India is situated in the middle of the four other divisions of India.

All these kingdoms had kings in the time of the Han dynasty. There is besides the kingdom of Yuen-too, which is distant from Chang-gan† 9,800 *le*; it is 2,800 *le* from the residence of the Governor-general of the Chinese provinces in Central Asia‡. To the south it adjoins the Blue Mountains; to the north its frontiers are contiguous to those of the Woo-sun.

Yăn-sze-koo has stated that Yuen-too is no other than Shin-too; and Shin-too is Tēen-choo; there is no difference but in the pronunciation more or less strong.]

From the kingdom called Kaou-foo§ of the Yuĕ-che, going to the west and south, as far as the Western Sea (the Indian Ocean); to the east, as far as Pan-ke; all these countries form the territory of Shin-too. It has a number of fortified towns; in about a hundred, commandants reside. There are also different kingdoms; ten of them have kings. There is, however, little difference between them, and the whole have the collective denomination of Shin-too.

Note of the Chinese Editor.

[The narrative of Foo-nan states: "The kingdom of She-wei (Kapila) belongs to that of Kea-she‖ in India, which some call the kingdom of Pho-lo-nae, and others the kingdom of Sze (or) She-pho-lo-na-sze."

Choo-fa-wei, in his *Făh-kwŏ-ke* (Memoir on the kingdoms of Fŭh, or Buddha), states that the kingdom of Pho-lo-nae (or Benares) is situated 1,480 *le* south of the kingdom of Kea-wei-lo-wei (or Kapila). In the account of the kingdom of Ching-le by She-fă, it is said: "Few oxen are killed in this kingdom; the sheep of the country are black; their horns, which are slender and apart, may be four feet long; one is killed about every ten days, but if any of these sheep happen to die of disease, the inhabitants use the blood of bullocks. These animals live a long time;

* See for an account of these countries by Ma-twan-lin, the translation by M. RE'MUSAT, *Nouv. Mél. Asiat.* t. i. pp. 205 and 248.

† Capital of the Hans, situated in Shen-se; now Se-gan-foo.

‡ This position of the kingdom of Yuen-too affords reason to think that it may be the same as that of Shin-too. It is only in the transcription of the Sanscrit word *Sindhá*, the name of the Indus and of the countries bathed by that river, that there is a slight difference. The proximity of the Woo-sun, however, suggests that Yuen-too must comprehend the country in which modern Badakshan is situated.

§ The following account of this kingdom is given by Ma-twan-lin elsewhere (b. 338, f. 27): "The kingdom of Kaou-foo was known in the time of the Hans. It is situated to the south-east of the great Yuĕ-che (Massagetæ). It is likewise a considerable state. Their manners resemble those of the inhabitants of India, and they are gentle and humane. They carry on much commerce. India, Cophenes, and the country of the Asæ, are three kingdoms which are *conquered by force and lost by weakness.*" The latter expressions are borrowed from the *Taou-ĭh-king* of Laou-tsze.

‖ काशी *Kási* or *Kashí* 'splendid,' epithet of the sacred city of Benares, called वरणसी *Varanasí* or वरणासी *Varanásí*. The latter denomination is represented as closely as is permitted by the monosyllabic language of the Chinese (which wants the articulation *ra*) by *Pho-lo-nae*: the Sanscrit व *v* having so often the sound of ब *b*, that they are not distinguished from each other in Bengálí writing: *Sze* (or) *She-pho-lo-na-sze* is also a faithful transcript of श्रीवरणासी *Srí Varanásí*, 'the holy, the fortunate Benares.'

the people of this country likewise are very long-lived. Their kings commonly reign a hundred years, and the bullocks live as long as the men. This kingdom is a dependency of India."]

The royal residence overlooks the river Hăng or Găng (Ganges)* which some call Kea-pĭh-le. Here is situated the mountain Ling-tseaou; called in the language of the Hoo-yu country, Ke-too-keu: it is a green rock, the head (or summit) of which resembles that of the bird *tseaou*.

Note of the Chinese Editor.

[Choo-fă-wei says, in his *Fŭh-kwŏ-ke*, that this mountain is situated to the south of Mo-kĕĕ-te†, which is also a kingdom dependent on India.]

At the period‡ when all these kingdoms belonged to the Yuĕ-che, the latter put their kings to death and substituted military chiefs. They enjoined all their people to practise the doctrine of Fŭh-too (Buddha); not to kill living creatures; to abstain from wine; and to conform entirely to the manners and customs of the inhabitants of the country, which is low and damp, and the temperature very hot. This kingdom is traversed by large rivers; the people fight upon elephants; they are of a feeble constitution compared with the Yuĕ-che.

The emperor Woo-te, of the Hans (B. C. 142 to 87), sent an expedition of about ten persons, by the west and south, in search of Shin-too. All information having been refused to the persons composing this expedition, they could not reach the country§. Under Ho-te (A. D. 89 to 106), several ambassadors from that country came to offer tribute‖. The western

* In Sanscrit गङ्गा *Gangá*; this river, in sacred writings, bears also the name of कपिल *Kapila*, and more commonly कपिलधारा *Kapiladhárá*.

† मगध *Magadha*, the southern portion of the modern Bahar.

‡ This important epoch in the history of India may be fixed with precision by means of Chinese historians; and it is not one of the least advantages derivable from the study of the writers of this nation. Ma-twan-lin, in his account of the Great Yuĕ-che, or Indo-Scythians (book 338, fol. 2), states that the Chinese general Chang-kĕen was sent as an ambassador to the Yuĕ-che, by the emperor Woo-te (B. C. 126), and that, about 100 years after, a prince of this nation, who possessed one of the five governments of the country of the Dahæ, subjected the Getes in Cophenes, and that Tëen-choo, or India, was again subjugated by the Yuĕ-che. This other conquest of India by the Scythians must be placed, therefore, about the year B. C. 26. Ma-twan-lin adds, that these Yuĕ-che, having become rich and powerful (by these conquests), remained in this state till the time of the latter Hans, who began to reign A. D. 222. It results from hence that the Scythians (or Yuĕ-che) must have been masters of Western India from about B. C. 26 till A. D. 222, that is, for a space of 248 years. The first invasion of India by the Yuĕ-che, or Scythians, must have taken place before the reign of Vicramáditya, whose celebrated era, which begins fifty-six years before ours, originated from the complete defeat of the Scythian armies by this Indian prince; an event which deserved to be thus immortalized. See *Indian Algebra*, by Mr. COLEBROOKE, (Preface, p. 43.) and Lassen, *De Pentapotamiâ Indicâ Commentatio*, p. 56. The first of these learned Indianists, from whom we are sure of deriving information, whenever we are engaged in the investigation of a great philological, scientific, and philosophical question respecting India, cites an ancient scholiast on Varáha Mihira, who thus explains the word "*saka*" employed by this astronomer to denote the Samvat era: "epoch when the barbarian kings named *Saka* (the Sacæ) were defeated by VICRAMA'DITYA."

§ This same emperor gained some trifling particulars respecting Shin-too, or India, by his general Chang-kĕen, whom he had sent to the Yuĕ-che, which are preserved by the historian Sze-ma-tsĕen, in his *Sze-ke* (book 123, fols. 6 and 7), where it is stated that Shin-too is situated to the east of Ta-hea, the capital of which was the city of Lan-she.

‖ At this period, China was still considered as the paramount state of all the half-civilized nations inhabiting Central Asia. It is not, therefore, surprising, that the chiefs of India subject to the Yuĕ-che, or Scythians, should have thought of sending ambassadors to China, in search of means of delivering their country from

countries (subjected to the Chinese) then revolted, and separated from the empire.

In the second of the years *Yan-he* of Hwan-te (A. D. 159) strangers often came by the way of Jih-nan ('south of the sun;' Tonquin and Cochin-China), to offer presents.

A tradition of this time relates that the emperor Ming-te (A. D. 58 to 76), having dreamed that he saw a man of gold, very large, whose head and neck shone with prodigious brightness, interrogated his ministers on the subject. One of them told him that, in the western region (*se-fang*), was a spirit (*shin*), whose name was Füh; that his statue was six feet high, and his color that of gold. The emperor, upon this, despatched ambassadors to India to learn the laws and doctrine of Füh, and to bring to China his portrait painted, as well as some of his statues. The king of Tsoo (a petty feudatory kingdom of China), named Ying, was the first who believed in this false doctrine (of Füh); hence it was that other persons in the Middle Empire adopted it.

Thereupon, Hwan-te (A. D. 147 to 167) imbibed a great partiality for the *shin* (spirits or genii); he sacrificed repeatedly to Füh-too and to Laou-tsze. The people of China gradually adopted (this new religion): its followers augmented greatly.

In the time of the How and Tsin dynasties (A. D. 222 to 280), no new relation took place between India and China; it was not till the period of the Woo dynasty, that the king of Foo-nan, named Fan-chän, sent one of his relations, named Soo-wïh, as ambassador to India. On quitting Foo-nan, the embassy returned by the mouth of the Taou-keaou-le*, continuing its route by sea in the great bay (or gulf of Martaban), in a north-westerly direction; it then entered the bay (of Bengal), which they crossed, and coasted the frontiers of several kingdoms. In about a year it was able to reach the mouth of the river of India, and ascended the river 7,000 *le*, when it arrived at its destination. The king of India, astonished at the sight of the strangers, exclaimed: "the sea-coast is very far off; how could these men get here?" He commanded that the ambassador should be shown the interior of the kingdom, and with this view he appointed as guides to attend him, two strangers of the same race as the Chinese†, and he supplied Soo-wïh (the ambassador) with provisions for his journey, and presents for Fan-chän, king of Foo-nan, consisting of Scythian horses, and four pieces of valuable woollen stuffs‡.

During this time, the Woo dynasty§ despatched an officer of the second rank, named Kang-tae, as ambassador to Foo-nan, where he saw foreign guides of the same nation as the Chinese. To all the questions he put to them, concerning the manners and customs of the people of India, they answered him as follows: "The doctrine of Füh is that which is in vogue in this kingdom. The population is very numerous; the soil rich and

barbarians, by the aid of the Chinese armies, which could oblige their revolted subjects to return to their duty. Thus we may easily explain facts apparently so improbable.

* The Irrawaddy, in the Burman empire.

† Literally: "in consequence, as attendants or guides (he had given to him) two men, foreigners, of the same species as the Sung." By *Sung-jin*, 'men of Sung,' Ma-twan-lin designates the Chinese, who were so called in his time; he wrote under the Sung dynasty, in the latter part of the thirteenth century. The sense which 宋 *chin* has received is that which it bears in the phraseology of the *Le-ke*, cited by the dictionary of Kang-he, in explaining this character.

‡ 四疋 *Sze-pei.*

§ One of the three dynasties which reigned simultaneously over three divisions of the Chinese empire: it subsisted from A. D. 222 to 280.

fertile. The king who rules here has the title of Maou-lun*; the suburbs of the fortified city in which he resided are watered by rivulets, which flow on all sides, and fill the deep ditches surrounding the city. Below it flows the great river (the Ganges). All the palaces are covered with sculptured inscriptions, and other ornaments in relief. A winding street forms a market, a *le* in length. The dwelling-houses have several stories†. Bells and drums are their instruments of music, and the dress of the people is adorned with fragrant flowers. They travel by land and by water; their commercial transactions are considerable, in jewels and other valuable articles of luxury, and every thing which the heart can desire is procurable here. On every side, to the right and to the left, you behold only agreeable and seductive objects; the houses are overshadowed by foliage, and cooled by the motion of waters of all kinds. There are sixteen great kingdoms which are remote from India; some distant 2,000 *le*; others 3,000. All these kingdoms honor and respect India, which they regard as placed between heaven and earth."

The fifth of the years *yuen-kea* of Wăn-te, of the Sungs (A. D. 428), the king of the kingdom of Kea-pih-le (Kapila) in India, named Yuĕ-gae ('beloved of the moon'‡), sent an ambassador to him to present him with letters of submission *(pe-ou)*, and to offer diamonds, valuable rings, bracelets, as well as other ornaments of worked gold, and two parrots, one red and the other white.

The second of the years *tae-she* of Ming-te (A. D. 466), an ambassador came to offer tribute. This ambassador had the rank of lieutenant-general of the army.

Note of the Chinese Editor.

[The eighteenth of the years *yuen-kea* (A. D. 441), the king of the kingdom of Soo-mo-le sent an ambassador to offer the products of his country. The second of the years *heaou-kĕen*, of the emperor Heaou-woo (A. D. 455), the king of the kingdom of Kin-to-le§ sent a superior officer to offer gold coin and precious vases. On the first of the years *yuen-wei*, of Fei-te (A. D. 473), the kingdom of Pho-le (?) sent an ambassador to offer tribute. All these kingdoms practised the doctrine of Fŭh.]

In the beginning of the years *tĕen-kĕen* of the dynasty Leang (A. D. 502), the king of India, named Keu-to, sent his great officer, named Choo-lo-ta, to present letters of submission, and to offer vases of crystal, perfumes of all sorts, precious talismans, and other articles of this kind.

This kingdom (India) is traversed by great rivers‖. The spring or

* This title must be the Chinese transcription of महाराज *Mahárana*; there can be no doubt in respect to the first syllable, *maha* (in composition) 'great;' but the Sanscrit word represented by *lun* (or *run*, *ran*) is less certain. At all events, this must be a king of India whose reign corresponded with this date, between A. D. 222 and 280.

† This is the case at Benares, where many of the houses have seven or eight stories; and the numerous temples and public edifices are covered with sculptures and bas-reliefs.

‡ In Sanscrit, *Chandrukánta*, 'well beloved of the moon,' a name also given to a precious stone; or rather it would be *Chandranandá*, 'joy or delight of the moon,' cited in the fifth table of the *Ayeen Akbari*, in the history of Cashmere. [Dr. MILL suggests that this monarch is Chandrasri. See p. 100 of Genealogical Appendix. —ED.]

§ The *Gandari* of Herodotus and Strabo? In Sanscrit गन्धरि *Gandhari*, or गन्धर *Gandhara*.

‖ "*Kuŏ lin ta keang*," literally, 'the kingdom overlooks great rivers.'

source, Sin-taou*, issues from mount Kwăn-lun†; its waters then divide into five streams, and form what are termed the affluents of the Ganges *(ming Găng shwuy)*. Their waters are sweet and beautiful, and at the bottom of their bed they deposit a real salt, the color of which is as white as that of the essence of the water *(shwuy tsing)*.

In the time of Seuen-woo, of the dynasty of the latter Wei (A. D. 500 to 516), South India sent an ambassador to offer as presents some horses of a fine breed. This ambassador stated that the kingdom produced lions, leopards, panthers, camels, rhinoceroses, and elephants; that there was a species of pearl there, called *ho-tse*, similar to talc *(yun-moo)*, the color of which was yellowish red *(tse*, 'reddish blue'); if it is divided, it disperses like the wings of the cricket; if it is heaped up, on the other hand, it becomes compact, like threads of silk strongly woven. There were diamonds resembling amethysts *(tse-shĭh-ying)*. When purified a hundred times in the fire, without melting, this diamond is used to cut jasper (*yu* stone). There were also tortoise-shell *(tae-mei)*, gold *(kin)*, copper *(tung)*, iron *(tĕĕ)*, lead *(yuen)*, tin *(seih)*, fine muslins embroidered with gold and silver‡; there are also a variety of odoriferous plants, *yăh-kin*, sugar-canes, and all kinds of products; honey-bread (or solid honey§), pepper, ginger, and black salt.

On the west, India carries on a considerable commerce by sea with Ta-tsin (the Roman empire), the An-se (or Asæ, Syrians); some of the Indians come as far as Foo-nan and Keaou-che (Tonquin), to traffic in coral necklaces and pearls of inferior quality (or which only resemble pearls—*san-kan*). These merchants are accustomed to dispense with books of accounts (in their commercial transactions). Teeth (elephants' or rhinoceros'?) and shells form their articles of exchange. They have men very skilful in magical arts‖. The greatest mark of respect which a wife can show towards her husband is to kiss his feet and embrace his knees: this is the most energetic and persuasive demonstration of the interior sentiments. In their houses, they have young girls who dance and sing with much skill¶. Their king and his ministers (*ta-chin*, ministers about the sovereign) have a vast number of silk dresses and fine woollen fabrics.

* These curious details, the exactitude of which may excite surprise, prove that the Chinese historians were better informed than might be expected of facts and circumstances concerning Central and Western Asia. We are indebted to Mr. COLEBROOKE for the means of ascertaining the accuracy of the Chinese writer. In fact, the Chinese words *Sin-taou* are but the transcription of the Sanscrit word सीता *Sítá*, the name of one of the sources of the Ganges. In a memoir on the sources of this river, this illustrious and profound Indian scholar cites the following passage from the astronomer BHA'SKARA ACHA'RYA: "The holy stream which escapes from the foot of VISHNU, descends from the abode of VISHNU on Mount Meru (the Kwan-lun), whence it divides into four currents, and passing through the air, it reaches the lakes on the summit of the mountains which sustain them. Under the name of *Sítá*, this river joins the Bhadráswa; as the *Alakanandá*, it enters Bharatavarsha (Hindustan); as the *Chackshu*, it proceeds to Ketumala, and as the *Bhadra*, it goes to the Kuru of the north."—*Siddhánta-Sirómani; Bharana-Kosha*, 37 and 38.

† Mount Meru. "The Hindus say that the Ganges falls from heaven upon its summit, and thence descends in four currents; the southern branch is the Ganges of India; the northern branch, which flows into Turkey, is the Bhadrasámá; the eastern branch is the Sítá, and the western is the Chakshu, or Oxus."—WILSON, Sanscrit Dict., 2nd edit., Art. *Meru*. The name *Meru* is the Μερος of the Greeks.

‡ These are, no doubt, the fine brocades, embroidered with gold and silver, for which Benares is still so celebrated, which continue to constitute an extensive article of commerce throughout India, and which European industry, however successful its efforts to imitate the products of the East, has not yet been able to rival.

§ *Shih-meih*, 'stone-honey.'

‖ 尤工幻化

¶ These are, no doubt, the nautch-girls.

He dresses his hair on the top of his head* (like the Chinese women), and the rest of the hair he cuts, to make it short. Married men also cut their hair, and pierce their ears, to hang valuable rings in them. The general practice is to walk on foot. The color of their dress is mostly white. The Indians are timid in battle; their weapons are the bow and arrows, and shield; they have also (like the Chinese) flying or winged ladders†; and, according as the ground will permit, they follow the rules of the *wooden oxen* and *rolling horses*‡. They have a written character and a literature, and they are well versed in astronomy or the science of the heavens, in that of numbers, and in astrology. All the men study the instructive books denominated *Seïthan*, written on the leaves of the tree *pei-to*, intended to preserve a record of things§.

Yang-te, of the Suy dynasty (A. D. 605 to 616), wishing to know the western countries (Se-yu), sent Pei-too to endeavour to determine the boundaries of the kingdoms of Se-fan (ancient Tibet). This envoy traversed many countries, but did not penetrate to India, believing that the emperor had some animosity against the king of this country, whose family was of the race of Ke-le-he, or Cha-le‖: at this period there were no troubles, no revolts in his kingdom.

The grain sowed in the marshy soils ripens four times a year¶. The barley, which grows the highest, exceeds the height of a camel. The women wear ornaments of gold and silver on their head, and necklaces of pearls. The dead are burnt, and the ashes of their bodies are collected and deposited in a place set apart; or they throw them into a waste spot, and sometimes cast them into a river: in this manner, funeral ceremonies with cakes of flesh of birds, wild animals, fish and tortoises, are dispensed with.

Those who excite revolts and foment rebellions are punished with death; slight crimes are expiated by money. A person who has no filial duty (or fails in duty towards his parents), suffers mutilation of hands, feet, nose, ears, and is exiled beyond the frontiers. There is a written character and a literature (in this country); the study of astronomical sciences has made great progress there; there are astronomical books in

* To form the जटा *jatá*. See the laws of MENU, book ii. v. 219, &c.

† *Fe-te*; this is a scaling-ladder, of which a representation may be seen in the *Art Militaire Chinois*, figs. 48 and 49.

‡ *Mäh-meaou*, and *lew-ma*. These are machines of war, of which we know not the form.

§ The following is the Chinese text of this important passage:—

有文字善天文等曆之術其人皆
學悉曇章書於貝多樹葉以記事

The two Chinese characters (2nd and 3rd of 2nd line) *seih-than* are a transcription of the Sanscrit word सिद्धान्त *Siddhánta*, which signifies 'established truth,' 'demonstrable conclusion,' and which forms the titles of many scientific books, as the *Súrya-Siddhánta*, a celebrated treatise on astronomy; the *Brahma Siddhánta*; the *Siddhánta Kaumudi*, &c. The leaves of trees, *pei-to*, (7, 8, of line 2) are the *olas*, on which most of the Sanscrit MSS. are written, especially those in Telinga characters which come from Southern India. *Pei-to* may be the transcription of पीत *píta*, 'yellow,' or पीतक *píṭaka*, the Sanscrit name of the aloe, the leaves of which are well adapted to the purpose indicated by the Chinese author, especially for writing traced with a style.

‖ That is, the royal and military caste of Kshatriyas; क्षत्रियजाति *Kshattriya játi*.

¶ *Taou*, 'grain that is planted amongst water; the paddy of the southern regions.'—*Morrison's Dict.*

the *Fan* (or Sanscrit) language ; leaves of the *pei-to* are used to preserve a record of things*.

There is a spot in this kingdom, where are said to be, and where are pointed out, ancient vestiges of the foot of Fŭh (or Buddha) ; in their creed, the followers of this religion affirm that these vestiges of Buddha really exist. They relate that, by carefully reciting certain prayers, they may acquire the shape of dragons, and rise into the clouds.

In the years *woo tih*, of the Tang dynasty (A. D. 618 to 627), there were great troubles in the kingdom. The king, She-lo-ye-to†, made war and fought battles such as had never been seen before. The elephants were not unsaddled in their rapid marches ; the soldiers quitted not their shields, because this king had formed the project of uniting the four Indias under his rule. All the provinces which faced the north submitted to him.

At this same period of the Tang dynasty, a zealous follower of Fŭh-too (Buddha), surnamed Heuen-chwang, arrived in this kingdom (of India). She-lo-ye-to caused him to enter his presence, and said to him : " Your country has produced holy (great) men. The king of Tsin‡, who has routed the armies of his enemies, ought to be well satisfied ; he may be compared to me ; tell me what sort of man he is?" Heuen-chwang replied by vaunting the exploits of T'ae-tsung, who had put down revolt and reduced the four nations of barbarians to submission to him. The Indian prince, full of fire and energy, was highly satisfied with this recital, and observed : " I will send (an embassy) to the court of the emperor of the East.'

In fact, in the 15th of the years *ching kwan* (A. D. 642), ambassadors from the king of the country called Mo-kea-to (Magadha) came to offer books to the emperor (Tae-tsung), who directed that an officer of cavalry of inferior rank, named Leang-hwae-king, should go at a prescribed time to assure the (king of India) of the peace and harmony which subsisted between them. She-lo-ye-to, surprised, inquired of the men of the kingdom (Indians), saying : " From the time of antiquity to the present day, have ambassadors from Mo-ho-chin-tan§ come into our kingdom?" They all replied : " None have hitherto come ; what is termed the kingdom of the Middle, is Mo-ho-chin-tan." Whereupon, the king, going to meet the ambassador, bent his knee in token of obedience and respect (*mŏ-pae*) to receive the letter (*chaou-shoo*) of the emperor of China, which he placed on the top of his head. Ambassadors (from the king of Magadha) came again, and directly, to the court. An imperial order directed an assistant

* This is a repetition of what has been before said ; but, as the object of Ma-twan-lin was to combine all the ancient documents and all the authorities known to him, which could tend to establish a fact, we only see in this a fresh proof of the exactness of the various Chinese accounts. Some of the Sanscrit astronomical treatises were translated into Chinese under the Tang dynasty.

† This proper name might be intended to represent the Sanscrit श्रीरहित *Śrírahita*. It remains to be seen whether a king of this name reigned in India at this period. [May it not rather be assimilated to the *Siladitya* who reigned in Saurâshtra in the 6th century? See M. JACQUET'S remarks in the last volume.—ED.]

‡ Tsin is the name of the dynasty which reigned over China from B.C. 249 to 202, during which the Chinese power caused it to be known for the first time in Central and Western Asia, its conquests being extended to the Caspian Sea and Bengal, in the reign of Tsin-she-hwang-te, the celebrated Burner of the Books. The name of this dynasty has formed that of *China*, in Sanscrit चीन *China*, which occurs in the Laws of MENU, book x. sl. 44, and therefore at a date anterior to the third century before our era, which may be easily explained in referring the name of *China* to the period of the foundation of the kingdom of Tsin in the western province of Shen-se, about B. C. 1000.

§ In Sanscrit, *Maha-China*, 'great China;' in the modern dialects of India, *Mahá-Chinastan*, 'the country of great China.'

of the department of war, named Le, to take cognizance of the letter of submission (brought by the Indian ambassadors), and to make a report upon it. The ministers reconducted the ambassadors without the city, and it was ordered that in the capital perfume should be burnt as they went along.

She-lo-ye-to, surrounded by his ministers, received, with his face turned to the east, the imperial document *(chaou-shoo)*; he again sent a present of pearls of fire *(ho-choo)*, *yŭh-kin* plants, and the tree *poo-te**.

The 22nd year, of the same period (i. e. A. D. 648), the emperor of China sent a superior officer, named Wang-heuen-tse, as ambassador into this kingdom (of Magadha), in order that the principles of humanity and justice, which had been diffused in that country, should have a protector and representative there. But before his arrival, She-lo-ye-to was dead; the people of the kingdom had revolted, and the minister (of the deceased king), named Na-foo-te-o-lo-na-shun, had taken his place. He sent troops to oppose the entry of Heuen-tse (the Chinese ambassador); under these circumstances, the latter took with him some tens of cavalry, and attacked the troops (of the usurper), but could not vanquish them, and his little force was exterminated; and the result was, that the tribute received (by the Chinese ambassadors) in the different kingdoms (he had visited) was taken. Heuen-tse retired alone, with all expedition, to the western frontiers of Too-fan (Tibet); and he ordered *(keaou-chaou)* the neighboring kingdoms to furnish him with troops†. Too-fan sent him 1,000 armed men; Nëë-po-lo‡ furnished 7,000 cavalry. Heuen-tse, after organizing his force, advanced to give battle as far as the city of Too-poo-ho-lo§, which he took by assault in three days. He caused 3,000 persons to be beheaded, and 10,000 were drowned in the river. O-lo-na-shun escaped into the kingdom of Wei. He there rallied his dispersed troops and returned to the charge. The (Chinese) general made him prisoner, with 1,000 men, whom he beheaded. The remainder of the people retired with the king's wives to the banks of the river Kan-to-wei‖. The humanity of the Chinese general (*sze-jin*¶) attacked them, and created a great disorder amongst this population. He likewise captured the concubines and children of the king, as well as other prisoners, men and women, to the number of 12,000, besides animals of all kinds, amounting to 20,000.

* The words *poo-te* are probably the transcription of the name of a tree in Sanscrit, perhaps the *vata*, a sacred tree employed in religious ceremonies, and of which mention is often made in Sanscrit poetry. What confirms this conjecture is the following passage in Kang-he's dictionary, under the character *poo*: "*poo-te* is the name of a tree which grows in the kingdom of Mo-kea-to (Magadha)." The same dictionary adds, that in the books of Fŭh, it is said, "Poo-te-sa-to (Bodhisattva) signifies the essence of what is manifest, declared; by abbreviation, we say 'Poo-sa.'" The term *Bodhisattva*, in Sanscrit, signifies literally, 'truth of intelligence:' it is the name given to certain Buddhist patriarchs, who have raised themselves to the state of divine sanctification.

† This authoritative demand, if it be not introduced here, as the facts, indeed, show, to gratify Chinese vanity, would denote that, at this period, Tibet was already dependent upon the Chinese empire as well as several other neighbouring kingdoms.

‡ Nepála, or Nepal: see the account given by Ma-twan-lin (book 335, fol. 14), in the translation by M. Re'musat, *Nouv. Mél. Asiat.* t. i. p. 193.

§ *Too* (the first character) may be read *cha*, or *tsa*. If it be read *cha*, the pronunciation of the epoch in question, *Cha-poo-ho-lo* would be an exact transcription of *Champaran*, a city placed by Abul-Fazil in Bahar, the ancient kingdom of Magadha, and probably the same as *Chapra*, on the Ganges, higher up than Patna; for *Chapra* is but a variation of *Champaran*, as the latter is likewise of *Champaranagara*.

‖ This is no doubt the Godáveri, which falls into the Gulf of Bengal, to the eastward of Masulipatam.

¶ The *humanity* is, at the least, a singular expression to be used in these circumstances; yet the text admits of no other sense.

He subjected 580 cities and towns, and his power grew so formidable, that the king of the kingdom of eastern India, named She-keaou-mo*. sent him 30,000 oxen and horses to feed and mount his army, as well as bows, sabres, precious collars, and cords of silk. The kingdom of Kea-mĭ-loo† furnished different articles, with a chart of the country‡, amongst which was a portrait of Laou-tsze.

Heuen-tse took with him O-lo-na-shun, to present him to the emperor (as a vanquished enemy). There had been an imperial order, which prescribed that the ancestors should be informed hereof, in the temple dedicated to them; and Heuen-tse was elevated, at the court, above the magistrates *(ta-foo)* of all ranks.

In his travels, the Chinese ambassador had encountered a doctor named Na-lo-urh-po-so-mei§, who told him that he was 200 years old, and possessed the recipe of immortality. The emperor‖ (having learned this intelligence) immediately quitted the hall of audience, in order to despatch an envoy in search of the philosophical stone *(tan)*. He directed the president of the ministry of war to furnish the envoy with all the necessary instructions and provisions to enable him to prosecute his journey. This envoy traversed "the world" on horseback, to collect supernatural drugs, as well as the most rare and extraordinary stones. He travelled over all the kingdoms of the Po-lo-mun (Brahmans), in the country called the Waters of Pan-cha-fa¶, which (waters) come from the midst of calcareous rocks *(shĭh-kew*, 'stone-mortar,' or 'rock'), where are elephants and men of stone to guard them. The waters are of seven different species; one is hot, another very cold (or frozen, *ling*). Plants and wood may be consumed in it; gold and steel may be fused in it; and a person who dips his hand into it will have it entirely burnt off. This water is poured into vases by means of skulls of camels, which turn round. There is also a tree there, called *tsoo-lae-lo*, the leaves of which are like varnish or blacking. It grows upon the top of scarped and desert mountains. Enormous serpents guard it; and those who wander in the neighborhood cannot approach it. A person who wishes to gather the leaves employs different arrows to strike the branches of the tree; the leaves then fall. A multitude of birds also take the leaves into their beaks, and carry them a great way: it is necessary, in like manner, to direct arrows against them, to obtain these leaves. There are other curiosities in this country of the same kind.

* Srí-kumára?

† This kingdom must be that of Kámá-rúpa, mentioned in the Sanscrit inscription on the column of Allahabad, and which formed the western part of the kingdom of Assam, on the frontiers of Tibet. The syllable *ká* is well represented by *kea*, as *ma* is by *mo*, and *rú* by *loo*; the last syllable *pa* is not transcribed. It is worthy of remark, that it is a general law of transcription from Sanscrit into Chinese, that the short *a* should be represented in the latter by *o*.

‡ This curious circumstance is a ground for thinking (for it is not a mere conjecture), that there existed, and perhaps still exist, in India, native geographical charts and works on geography; but all these articles must have undergone the fate of the royal archives, where they were carefully preserved and concealed from the eager eyes of European conquerors.

§ The first two words of this transcription represent faithfully the Sanscrit word नर *nara*, 'man,' which enters into the composition of many proper names; but the Sanscrit value of the other four syllables is more difficult to determine.

‖ Tae-tsung, who reigned from A. D. 626 to 649.

¶ This is a very exact transcription of the Persian word پنجاب *Panjáb*, the 'five waters,' or 'five rivers' (in Sanscrit *Panchananda*), which is the designation given to a large and fertile province of India. The last syllable *fa*, in the Chinese transcription, represents the more faithfully the syllable *áb*, inasmuch as the consonants composing it are two labials very often taken one for the other.

The drug (of immortality) could not be found or verified by this envoy, who, being recalled, could not proceed further, and returned and died at Chang-gan (the capital).

In the time of Kaou-tsung (A. D. 650 to 684), a Loo-kea-ye-to*, of the country of Woo-cha†, in eastern India, came likewise to offer homage at the court of the emperor, giving himself out as a possessor of the recipe of immortality, and as being able to transform himself into lieutenant general of armies.

In the third of the years *këen-fung*‡ (A. D. 667), the Five Indias (or five kingdoms of India) sent ambassadors to the court of the emperor. In the years *kae-yuen* (A. D. 713 to 742), an ambassador from Central India proceeded three times as far as the extremity of southern India, and came only once to offer birds of five colors that could talk§. He applied for aid against the Ta-she‖ (or Arabs) and the Too-fan (or Tibetans), offering to take the command of the auxiliary troops. The Emperor Heuen-tsung (who reigned from A. D. 713 to 756) conferred upon him the rank of general-in-chief. The Indian ambassadors said to him: "the *Fan* (or Tibetan) barbarians are captivated only by clothes and equipments. Emperor! I must have a long, silk, embroidered robe, a leathern belt decorated with gold, and a bag in the shape of a fish." All these articles were ordered by the emperor.

Northern India also sent an embassy to the court of the emperor.

At the close of the years *kan-yuen* (about A. D. 756), the bank of the river (*Ho-lung*, the Ganges?) gave way and disappeared.

The third of the years *kwang-shun*, of the modern Chows (A. D. 953) a Să-mun¶ (priest of Buddha), of western India, with several priests of his religion, representing sixteen different tribes or nations (of India), brought tribute, amongst which were some horses of the country.

The third of the years *kan-tĭh*, of the Sung dynasty (A. D. 966), a Buddhist priest of Tsang-chow, named Taou-yuen, who had returned from the western countries (Se-yu), had brought from thence a portion of

* That is, a चार्वाकायनिक *Lókáyatika*, or follower of the atheistical system of philosophy founded by Chárwáka, entitled *Lókáyata* (see Mr. COLEBROOKE'S Essays on the Philosophy of the Hindus). The suffix *ka*, which forms collective names in Sanscrit, is represented in Chinese by the character *che*, which serves in like manner to form adjectives and collective names in Chinese.

† A kingdom situated near the mouths of the Ganges.

‡ There is an error here in the text; the years *këen-fung* were only two, 666 and 667.

§ These were of course parrots.

‖ *Ta-she*, 'great eaters,' (rather *tázi*, Arabian, J. P.) is the name by which the Chinese designate the Arabs. This curious passage throws great light on this obscure period of Indian history, and confirms a fact hitherto scarcely noticed, but which has been asserted by two Arabian authors, ALMAKIN and ABULFEDA, namely, the invasion of India by the Arabs at the beginning of the eighth century. "MAHOMED BEN CASSIM," says the former, in his history of the Sarrasins, "took India; he obtained possession of the countries adjoining the Sind (Indus), gave battle to DAHAR, who was king of them, vanquished him, made him prisoner, and put him to death." The other, in his Musulman Annals, translated by REISKE, says: "MAHOMED BEN CASSIM overrun India as conqueror." But the following is a passage, curious in another respect, concerning the same fact; it is taken from the History of the Empire of the Khalifs, translated from Tabari (Turkish edition), for a knowledge of which we are indebted to M. REINAND: "This same year, 87 (A. D. 709) was gloriously terminated by the defeat of 200,000 barbarians, who had entered the country of the Musulmans, commanded by BEGHABOON, nephew of the emperor of China. The Musulmans confessed that they owed this important victory to the protection of God."

¶ This Indian title is more frequently written *Sha-mun* (with different characters); it is a close transcription of the Sanscrit *Samána*, (rather, *Sramana*. J. P.)

the body of Füh*, vases of crystal, and Sanscrit writings on leaves of *Pei-to*, to the number of forty, which he presented to the emperor. Taou-yuen returned to the western countries (of Asia) in the years *tëen-füh* (A. D. 943 to 944); he was twelve years on his travels, wandering in the Five Zin-too for six years. The Five Zin-too (divisions of India) are the same as Tëen-choo† (India). He brought back an abundance of books, to understand the use of which he exerted all his efforts. The emperor Tae-tsoo (who reigned from A. D. 950 to 953) summoned him into his presence, for the purpose of interrogating him respecting the manners and customs of the nations amongst whom he had travelled; the height of the mountains, and extent of the rivers. He answered all the questions one by one. For four years, a priest of Buddha, he dedicated all his cares to one hundred and fifty-seven persons. On his return to the palace, he said he had been desirous of returning into the western countries in search of the books of Füh (or Buddha); that he had found some of them where he had travelled, in the provinces of Kansha, Se-soo, and others; that these provinces (*chow*) produced tortoises, herbs, and woods, in great abundance, the export of which yielded the revenue of the kingdom. Moreover, he passed beyond the kingdom of Poo-loo-sha and of Kea-she-me‡. Orders were everywhere given that guides should be provided him on his route.

After the years *kae-paou* (about A. D. 969), a Buddhist priest of India brought some Sanscrit books (or Indian presents§), and envoys continued to bring them from thence. During the winter of the eighth year, the son of the king of Eastern India, named Jang-këë-kwang-lo (?) came to court to bring tribute. The king of the kingdom of the Law in India‖ happening to die, his eldest son succeeded him; all the other sons of the deceased king quitted their royal abode, and became priests of Buddha, and returned no more to reside in their native kingdom. One of the sons of this Indian king, named Man-choo-she-le¶, came into the kingdom of the Middle (China) as a Buddhist priest. The Emperor Tae-tsoo ordered that he should be provided with an apartment in the palace of his ministers of state, that he should be well treated whilst he remained in the capital, and that he should have as much money as he required. The body of Buddhist priests conceived a jealousy against him; and being unable to repel the false accusations, of which he was the object, he requested permission to return to his native kingdom, which was granted by the emperor, who published a proclamation on the subject. Man-choo-she-le, at first, was much alarmed at their intrigues; but when all the Buddhist priests knew the meaning of the

* *Tǐh-Füh-shay-le-yth*: the characters *shay-le* are the transcription of the Sanscrit word शरीर *Shárira*, 'body,' or शरीरिन *Sháririn*, 'corporeal.' Dr. MORRISON, in his Dictionary (Vol. I. Part i. p. 5 0 , states on an authority unknown to us, but apparently to be relied on: "*Shay-le-ta*, a Pagoda, raised over certain relics or pearly ashes of Buddha; these, it is said, are contained in a gold box; if, on being opened, they exhibit a dingy appearance, it is deemed a bad omen; if a red appearance, a good omen."

† Another transcription of the Sanscrit सिन्ध *Sindhú*, the river Indus, whence the European and Arabic name of India.

‡ These are the kingdoms of Purusha and Cashmere. See Ma-twau-lin, book 335, fol. 15, and M RE'MUSAT'S translation, *Nouv. Mélanges Asiat.* t. I. p. 196.

§ *Che-fan-lae*, 'Presents from Che-fan.' It is not said in the text what was the nature of the articles brought; but it is fair to presume, that they were Buddhist books in Sanscrit, which were subsequently translated into Chinese.

‖ *Tëen-choo-che-fă-kwŏ*, 'the kindom of the Law of India;' apparently the kingdom of the Law of Buddha, i. e. Magadha.

¶ In Sanscrit मञ्जुश्री *Manjusrí*, a term which denotes a Buddhist saint.

imperial proclamation, they were disconcerted in their projects. The Buddhist priest prolonged his stay for a few months, and then departed. He said that it was his intention to embark on the southern sea (perhaps at Canton), in a merchant vessel, to return to his own country. It is not known where he eventually went.

On the 7th of the years *tae-fing-hing-kwŏ* ('the kingdom in great peace and prosperity'), equivalent to A. D. 983, a Buddhist priest of E-chow, named Kwang-yuen, returned from India; he brought from thence a letter from the king, Moo-se-nang*, to the emperor (of China). The emperor ordered that an Indian Buddhist priest should translate the letter, and acquaint him with the contents of it. The letter was to this effect; "I have lately learned, that in the kingdom of *Che-na*, there existed a king, most illustrious, most holy, most enlightened; whose majesty and person subsist in themselves and by themselves. I blush every moment at my unfortunate position, which hinders me from visiting your court, in order to pay my respects to you in person. Remote as I am, I can only cherish, with hope, a regard for *Che-na*†; whether you are standing or sitting, in motion or at rest, (i. e. in all circumstances of life,) I invoke ten thousand felicities on your holy person‡."

Kwang-yuen also brought certain rare drugs, diamonds, talismans, amulets, to obtain good fortune, and secure the bearer against danger, as well as holy images of Sae-kea§, vestments without sleeves, called *kea-sha*, sometimes worn by the priests of Buddha in the exercise of their functions, and various articles used by the hand in eating, which he desired to be humbly offered to the august emperor of China, "wishing him all kinds of happiness; a long life; that he might always be guided in the 'right way;' and that all his wishes might be fulfilled: in the middle of the ocean of life and of death, most of those who cross it are engulphed‖." Kwang-yuen then presented to the emperor, in person, a portion (or reliques) of the body of She-kea. He likewise translated and explained the entire contents of the letter, brought by a Buddhist priest, from the same kingdom (India); the expressions and sentiments are the same as in that of Moo-se-nang. The bearer of this document learned that it was from the kingdom of Woo-tĕe-nang (or Woo-chin-nang); that this kingdom belonged to Yin-too, of the north; that in twelve days, from the west, you arrive at the kingdom of Khan-to-lo (Candahar); twenty days further to the west, you reach the kingdom of Nang-go-lo-ho-lo; ten days further to the west, you come to the kingdom of Lan-po; twelve days more to the west, is the kingdom of Go-je-nang; and further to the west, that of Po-sze (Persia); after reaching the western sea (the Persian gulph), from northern Yin-too, in 120 days' journey, you arrive at the Central Yin-too; from thence to the westward, at the dis-

* In Sanscrit, *Mahá-Sinha*, 'Great Lion,' an epithet often given to Indian kings or, perhaps, rather the transcription of *Madhu-Sinha*, the name of a king of Bengal, mentioned in the *Ayeen Akberi*. We shall make here but one observation respecting the law of transcription of foreign names in Chinese, for the benefit of those who have not studied the language; namely, that the Chinese nasal termination *ang* has the same value as the *anuswara* in Sanscrit, or the labial म् *m* at the end of words. It is, therefore, equivalent to the Sanscrit accusative: a termination which has become general in the dialect of the south of India.

† The first of the two characters which express this name (and which is an accurate representation of the Sanscrit चीन *China*) is differently written in two places; both are pronounced *Che*.

‡ This letter has been cited by Dr. MORRISON, in his *View* of China, but from a different author; from Ma-wan-lin.

§ Shákya-muni, patronymic name of Buddha.

‖ This, we believe, to be the exact sense of this Buddhist phraseology.

tance of three *ching**, is the kingdom of Ho-lo-wei; still further to the west, in twelve days' journey, you reach the kingdom of Kea-lo-na-keu-je (Karana?) and in twelve days' journey more to the west, you come to the kingdom of Mo-lo-wei (Malwa; in Sanscrit *Málava*); further to the west, twenty days' journey, is the kingdom of Woo-jan-ne (Oujein or, Sanscrit Ujjayaní). In another twenty-five days' journey still to the west, you visit the kingdom of Lo-lo; and forty days' journey further to the west, the kingdom of Soo-lo-to (Surat); in eleven days' journey further to the west, you get to the Western sea. This makes in the whole a six moons' journey from Central Yin-too. When at Southern Yin-too, in ninety days' journey to the west, you arrive at the kingdom of Kung kea-na; and in one day further to the west, you come to the sea. From Southern Yin-too, in six months' journey to the south, you reach the South Sea (the sea of China). This was what was related by the Indian envoy.

The eighth year (983), a priest of Buddha, master of the law†, came from India, bringing books. In traversing part of the island of Sumatra‡, he met with the Buddhist priests Me-mo-lo, Che-le-yoo-poo-to; he charged them (as superior priests?) with a letter, which he wished to transmit to the kingdom of the Middle, with a great number of translated books. The emperor caused them to come to court to gratify his curiosity. The master of the law of Buddha (*fă*) again met with some mendicant Buddhists, wearing vestments without sleeves, and valuable head-dresses in the form of serpents§. He returned with them on their journey to India. A letter of recommendation (*peaou*) was given him, to enable him to traverse the kingdom of Tibet, with letters of credence, delivered by the emperor, to present to the king of the kingdom of San-fŭh-tsi or Sumatra. From this remote country he proceeded to the sovereign (*choo*) of the kingdom of Go-koo-lo, and that of the kingdom of Sze-ma-kiĕ-máng-ko-lan (the Mongul empire?). He recommended Tan-lo to the king of the Western Heaven‖, and his son formed the design of sending him, by his means, works on the spirits and genii.

In the years *yung-he* (984 to 988), a Buddhist priest of Weï-chow, named Tsoo-hwan, returning from the western countries of Asia (*Se-yu*), with another Buddhist priest from a distant country, named Mĭh-tan-lo, where he had been presented to the king of Northern Yin-too, seated on a throne of diamonds, and named Na-lan-to, brought some books. There was besides a Brahman priest, named Yung-she ('eternal age'), and a Persian infidel (*gae-taou*), named O-le-yan, who came together to the capital. Yung-she said that his native country was called Le. It was ascertained that the family name of the king of this kingdom was Ya-lo-woo-te; that his first name was O-jĭh-ne-fo; that he wore a yellow dress, and had on his head a cap of gold, adorned with seven precious gems. When he goes out, he mounts an elephant; he is preceded by couriers, with musical instruments on their shoulders; the crowd rush into the temple of Fŭh, where he distributes gifts to the poor, and suc-

* The European Chinese dictionaries do not give the value of this itinerary measure. In the Dictionary of Kang-he, it is stated to be a measure of distance, but no equivalent is stated.

† *Sang-fa*; in Sanscrit, *Sangha* and *Dharma* (the priest, or religious meeting), and the law.

‡ *San-fŭh-tsi*.

§ "Valuable head-dresses (or caps), in the form of serpents," are, doubtless, the shawls which the modern Muhammadans, as well as the Hindus, wrap round their heads.

‖ *Tsan-tan-lo-se-tĕen-wang*.

cour to those who need it. His concubine was named Mo-ho-ne ; she wore a red dress, adorned with gold filagree work. She goes out but once a year, and distributes gifts freely. People flock to attend the king and his concubine, and raise shouts of joy as they pass. There are four ministers to administer all the affairs of the kingdom, who are irremovable. The five kinds of grain and the six kinds of edible fruit, are the same as the Chinese. They use copper money for purposes of commerce. They have a literature and books, which are long and are rolled up as in China, except that the leaves are not pierced and attached one to another.

From their kingdom, six months' journey to the East, you arrive at the kingdom of the Ta-she (Arab) ; in two moons more, you get to Se-chow (the Western Isle) ; in three moons more, you arrive at Hea-chow (the Isle of Summer). O-le yan says, that the king of his native country was entitled *hĭh-yih* (Black-dress) ; that his family name was Chang, and his first name Le-moo ; that he wore silk dresses, embroidered and painted in different colors ; that he wore each only two or three days, resuming them once. The kingdom has nine ministers, irremovable, who direct state affairs. Commerce is carried on by barter, no money being used.

From this kingdom, six months' journey to the East, you arrive at the country of the Brahmans*.

The second of the years *che-tuou* (996), some Buddhist priests from India, who arrived in ships as far as the mouth of the river (*che-gan*), bringing to the emperor a brass bell and a copper bell, a statue of Fŭh†, and some *Fan* (Indian) books, written upon leaves of the *pei-to* tree, the language of which is not understood.

The third and ninth of the year *tëen shing* (1025 to 1031), some Buddhist priests of Western Yin-too, lovers of wisdom, knowledge, sincerity, and other virtues of this kind‡, brought *Fan* books § as presents, revered as canonical. The emperor gave to each a piece of yellow stuff, to wrap round the body, in the form of a band.

The second moon of the fifth year some *Sang-fă*, to the number of five, denominated 'fortunate' and 'happy,' and by other epithets of the same nature, brought presents of Fan books. The emperor gave them pieces of yellow stuff to make trailing robes for them.

The third of the years *king-yew* (1036), nine Buddhist priests, called 'the virtuous,' 'the exalted,' &c., brought as tribute, Fan books and bones of Fŭh, with teeth, copper, and statues of Poo-sa (Boddhisatwas) : the emperor gave them caps and bands.

[*To be continued.*]

* Here ends the first narrative of the *Yuen-keen-luy-han*.

† This traffic in images of Buddha continues to the present day, as may be proved by the well-known circumstance of the large stone statue seized on its way down the river from *Patna*, at the breaking out of the Burmese war, and restored from the museum, wherein it was deposited, only three years ago. It would be curious to ascertain whether any Buddhist images in *China* bear the Nágarí inscription *ye dharma hétu*, &c., like those dug up at *Tugoung* in *Ava*.—ED.

‡ These are translations of Sanscrit Buddha epithets.

§ *Fan-shoo-king*, 'classical Indian books.'

X.—*Proceedings of the Asiatic Society.*

Wednesday Evening, the 1st February, 1837.

The Rev. Dr. MILL, Vice-President, in the chair.

Mr. J. CURNIN, Captain F. JENKINS, Mr. GEORGE HILL, and Mr. RICHARD WALKER, Captain EDWARD SANDERS, Bábus RA'MNA'TH TAGORE and PRASANNAKUMAR TAGORE, proposed at the last meeting, were ballotted for, and duly elected Members of the Asiatic Society.

Mr. J. MILL, and Mr. W. CRACROFT, were proposed by Mr. J. PRINSEP, seconded by Dr. MILL.

Mr. P. A. LAIR, proposed at the last meeting, was, upon the favorable report of the Committee of Papers, elected an Honorary Member of the Society.

The following letter from Sir ALEXANDER JOHNSTON, Chairman of the Committee of Correspondence, Royal Asiatic Society, was read.

Royal Asiatic Society, Grafton Street, Bond Street, June, 1836.

MY LORDS AND GENTLEMEN,

The vast extent, fertility, and populousness of our Indian possessions, are known, in a general way, to all the world. A glance, indeed, at the map will shew that their extremes of latitude may, without exaggeration, be indicated by the distance from Gibraltar to the farthest point of Scotland; and that the measure of their extent, from west to east, will be nearly found in a line drawn from the Bay of Biscay to the Black Sea. Lying between the 5th and 31st degree of north latitude, with almost every conceivable variety of position and exposure, they present a range of soil and climate greatly exceeding that which is to be found within the bounds of Europe. They embrace, in truth, the utmost limits of vegetable life, from the burning heat of the desert to the point of perpetual congelation: presenting, in one quarter, the loftiest mountains in the world; and, in another, vast alluvial plains, intersected by the natural channels of many noble rivers, with a corresponding variety of productions belonging both to tropical and northern regions. Not less than eighty millions of people are subject to the dominion of England: already they produce (though with imperfect skill) most of the articles which form the great staples of the import trade of this country, as materials of its manufacture, or as the objects of comfort and luxury to the great body of its inhabitants, of which cotton, silk, indigo, sugar, coffee, and tobacco, may be mentioned as pre-eminent; and they offer an assured prospect of an almost boundless market for the produce of English manufacturing skill, if the capabilities of their country be drawn forth, and their industry be duly instructed, directed, and fostered.

But though these general truths be readily acknowledged, their practical application is very imperfectly understood. Few men in England really know what India does or can produce, with sufficient precision, at least, to justify commercial speculation. Few in India know what England requires; and none of the lights of modern science having been applied to the agriculture of the former country, its productive powers have, as yet, been very imperfectly developed.

Believing that the interests of both countries may be very importantly promoted by an interchange of knowledge, and especially by communicating to India the information and stimulus which are alone wanting to the full development of its vast resources, it has been resolved by the Royal Asiatic Society, to constitute a distinct Section, for the following, and other similar purposes; provided the necessary funds can be raised for giving adequate effect to the design.

1st. The examination of the natural and agricultural products of India, available for the purposes of commerce and art.

2ndly. Inquiry into the causes of the general inferiority of the staple articles of Indian commerce.

3rdly. The introduction of new articles and processes from analogous climates in other parts of the world.

The Committee of Correspondence of the Royal Asiatic Society beg leave to bring the circumstance to your notice; trusting, confidently, on your zealous support of a measure, calculated to promote objects alike interesting to the patriot and the philanthropist.

Of the means of support, the most acceptable would, of course, be such an accession of new members, European or Asiatic, as would at once provide the necessary funds, and as would afford the requisite contribution of knowledge and experience in the various branches of inquiry to which the labors of the Section are to be directed. But the Society will be most happy to receive the tender of the aid (whether in knowledge or funds) of affiliated Societies, pursuing the same beneficial objects, or any other co-operation or assistance which you may have the goodness to offer.

For the fuller explanation of the scheme in question, the Committee direct me to transmit to you the accompanying printed papers; and I shall be happy to afford you any further information in my power, in regard to it, that you may require.

I have the honor to be,
My Lords and Gentlemen,
Your most obedient humble servant,
ALEXANDER JOHNSTON,
Chairman of the Committee of Correspondence, R. A. S.

To the President, Vice-Presidents and Members of the Asiatic Society of Bengal.

Resolved, that a portion of the papers be made over to the Agricultural Society, and that general circulation be given to the Royal Asiatic Society's prospectus.

A letter from Mr. ALEXANDER VATTEMORE, addressed to the Governor General of India, was read, proposing to negociate a general system of exchanges of duplicates between the various libraries and museums of the world.

Resolved, that copies of the library catalogue now printing be furnished to Mr. VATTEMORE, in furtherance of his laudable design.

The following protest from members of the Society residing in the interior was communicated by Colonel J. COLVIN.

Dissentient.

It appears to us that in a society constituted as the Asiatic Society of Bengal is, the existence of a fund vested in Government Securities is absolutely necessary for the permanence of the foundation.

We consider that such funds are intended to be reserved for cases of extreme emergency, and that the interest only of *such funds* should be carried to the current expenses of the Society.

We also consider that any infringement of a law upon which the Society's existence may be said to depend, is injurious not only to the Society itself as a body, but to the interests of the members individually; and may be drawn in as a precedent for further encroachments, leading to the ultimate dissolution of the Society.

For these reasons, we dissent from the resolution passed at the meeting of the Society of the 4th May, 1836, continuing the services of a Curator at two hundred rupees per mensem; the account current shewing a deficiency of rupees 571-0-1, and the payment of the Curator's salary being proposed to be made out of the vested funds of Mr. BRUCE. Further, in adverting to the Secretary's remark, "that M. BOUCHEZ, the assistant and working Curator, would be competent to set up all new specimens and preserve the present col-

lection," we see no necessity, under the present difficulties of the Society, of retaining the higher appointment.

Northern Doab, 14*th Dec.* 1836;	P. F. CAUTLEY, *Capt. Arty.* H. FALCONER, M. D. W. M. DURAND, *Lieut. Engrs.* W. E. BAKER, *Lieut. Engrs.*
and, Calcutta, 26*th Jan.* 1837.	ALEXANDER COLVIN. JOHN COLVIN, *Lieut.-Col. Engrs.*

After discussion it was agreed that the protest could not affect the resolution passed by the Society in May, 1836, but that it would very properly become matter of consideration at the expiration of the annual term for which the museum grant was then confirmed.

The Secretary read correspondence with Mr. LANE respecting the publication of his Anglo-Burmese Dictionary under the Society's auspices. He had written to Colonel BURNEY for the manuscript, which would immediately be put in hand.

A statistical paper having been communicated by Mr. H. WALTERS, that gentleman was requested to join the Committee lately appointed for that object, to which he assented.

Library.

The following books were presented.

Bulletin de la Societé de Geographie, tome 5—*by the Geographical Society of Paris.*

Journal Asiatique for April, May, and June, 1836—*by the Asiatic Society of Paris.*

Shams-ul hindisah, a mathematical work, compiled by the Nawáb SHUMSOOL OOMRA at *Hyderabad—presented by the author through Mr. C. Trench.*

An Australian Grammar, comprehending the principles and natural rules of the language as spoken by the Aborigines, by L. E. THRELKELD—*by the author through Mr. Cracroft.*

A collection of examples on the Integral Calculus, by Mr. H. SHORT, Queen's College, Cambridge—*presented by Mr. H. Horneman.*

A dissertation on the soil and agriculture of *Penang*, by Major JAMES LOW—*by the author.*

The first No. of the Medical and Physical Society's Journal—*by the Society.*

The following books were received from the booksellers:

Lardner's Cabinet Cyclopedia, England, Vol. 6th.

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Analecta Arabica, Part I.

Institutiones Juris Mohammedani circa Bellum contra eos qui ab Islamo-sunt alieni, by ERN. FRID. CAR. ROSENMULLER, Leipsig, 1825.

Y King, Antiquissimus Sinarum Liber ex Latinâ Interpretatione P. Regis aliorumque, &c.; by Professor JULIUS MÖHL.

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Physical.

The fossil bones from the *Perim* island, presented by Lieut. GEORGE FULLJAMES, Bombay Engineers, were laid on the table for inspection.

This very valuable acquisition comprises many jaws of the mastodon in fine preservation—also jaws or teeth of the hippopotamus, elephant, rhinoceros, a larger animal assimilating thereto (lophiodon?), mastodon, sow, anthracotherium (?) deer, ox, &c., the femur of an elephant as large as that from the Nerbudda,

and much exceeding in size, as was remarked by Colonel COLVIN, any that had been found in the *Sewalik* range, many vertebræ and unidentified bones and horns, tortoise fragments, and a peculiarly perfect saurian head. The special thanks of the Society were voted to Lieutenant FULLJAMES for his magnificent donation.

[We shall take an early opportunity of lithographing some of the most curious of these specimens.—ED.]

Lieutenant FULLJAMES mentions that he is now employed in sinking a bore at *Gogo*, about five miles from *Perim*. It has been already carried to 250 feet:—the last 150 through an immense bed of blue clay, containing pyrites and shells, resembling the muscle:—the deepest bed of sandstone was thirty feet, but it differed essentially from the bone stratum of *Perim*.

A skeleton of the common hog *(sus scrofa,)* was presented by Dr. A. R. JACKSON, mounted in the museum.

Mr. WILLIAM CRACROFT presented to the Society a large variety of objects of Natural History, collected by himself during his residence in New South Wales and Van Dieman's Land; accompanied with an illustrative notice.

This collection contained three volumes of a hortus siccus of the chief indigenous plants of these colonies—a rich series of ornithology and conchology—and specimens of the fossil shells, fossil wood, and minerals of which the islands present so many fertile deposits; ores of lead, copper, and iron, have been discovered, but are not yet worked, and coal is plentiful.

[The author's notes will be inserted hereafter.—ED.]

Dr. G. EVANS exhibited to the meeting a very large skull of an animal generally considered to be the Bison of Indian forests, which he recognized as the Gaur *(Bos gaurus)*, and distinguished from the skull so named in the museum.

[The note, outline, and arguments pro and con shall have early insertion.]

It was moved by Sir BENJAMIN MALKIN, seconded by Colonel COLVIN, and carried unanimously,

That, with reference to the rapid increase of the museum, particularly in the department of fossil geology, and to the limited funds at the Society's disposal, the subscription of individual members shall be invited for the preparation of cabinets and other improvements connected with this highly important branch of the Society's researches, and that the Secretary do circulate a notice to this effect to members of the Society.

[The sum subscribed by members present is inserted on the cover notice, to which the attention of members is invited.—ED.]

The following notice, dated *Sihor*, 17th January, was recorded in hopes of eliciting further observations of the same phenomenon.

At *Bersia*, Lat. 23° 38′. Long. 77° 30′, on January 11th, at 6h 00m, a meteor appeared near β Andromedæ, and not far from the Zenith; it went down to the westward, occupying 2 or 3 seconds in its flight, and inclining a little to the left; at about 30° of altitude it burst into a globe of light little inferior to the sun in size and brightness; and then disappeared, leaving behind a long train of smoke which continued visible for many minutes, like a thin cloud enlightened by the sun's rays; at about 6h 5m a faint rumbling sound was heard like the distant discharge of artillery. The appearance was nearly the same at *Sihor*, though distant 36 miles S. S. W.

Should this meteor have been noticed at *Mhow* or *Ajmír*, the place over which it burst may be determined, and probably a meteoric stone discovered.—W. S. J.

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Meteorological Register, kept at the Assay Office, Calcutta, for the Month of January, 1837.

Day of the Month.	Observations at 10 A. M.						Calculated Humidity.			Observations at 4 P. M.						Calculated Humidity.			Temperature of water at 10 A. M.		Rain.	Wind.		Weather.	
	Old Stand. Barometer at 32°.	New Stand. Barometer red.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Ditto by dew-point.	Do. by hair Hygrm.	Old Stand. Barometer at 32°.	New Stand. Barometer.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Ditto by dew-point.	Do. by hair Hygrm.	River.	Well.		10 A. M.	4 P. M.	Morning.	Evening.
1	30,078	30,044	67,1	9,0	8,7		77	50		54	29,978	29,925	74,7	15,5	13,6			30			nil.	nil.		N.	nw.	*cumuli.*	*cumuli.*
2	,060	,047	67,7	10,7	11,1		73	42		48	,000	,908	73,4	16,2	16,0		67,0	25		30				n.	nw.	fine.	fine.
3											,9,0	,92.	74,7	15,0	15,0		64	27		36					nw.		clear.
4											,937	,888	74,7	15,6	16,0		66	25		38					nw.		do
5	,007	29,989	65,0	12,0	12,0		73	35		48	,998	,948	72,3	16,1	15,6		67	25		40				nw.	nw.	clear.	do
6	,031	30,010	64,3	8,0	9,3		79	52		57	,922	,875	71,1	15,1	15,0		63	27		34				N.	n.	do	do
7	,068	,047	64,7	9,6	10,6		76	45		52	,980	,921	70,7	13,0	14,0		71	35		44				nw.	nw.	do	do
8	,113	,085	64,9	7,3	7,8		81	58		60	,010	,616	71,4	11,2	9,7		77	46		53				nw.	n.	do	fair.
9	,082	,050	66,6	5,7	6,3		82	67		62	,977	,924	72,6	11,5	11,0		71	44		46				o.	nw.	hazy.	do
10	,071	,035	68,3	5,7	6,3		80	57		59	,990	,934	73,5	11,7	12,1		72	42		46				w.	S.W.	cir. cumuli.	fine.
11	,127	,098	66,6	5,9	6,3		85	64		68	30,033	,980	73,1	11,7	11,7		72	42		46				N.	N.	clear.	fair.
12	,12	,128	65,4	8,9	9,8		78	52		55	,060	30,008	72,7	12,5	11,3		72	40		46				N.	n.	do	do
13	,144	,124	66,5	6,8	7,7		83	62		64	,022	29,999	73,1	12,4	13,7		70	40		43				*N.*	*n.*	*do*	*fine.*
14	,165	,149	67,9	8,0	9,0		76	55		52	,037	,997	74,7	14,0	14,1		68	35		40				o.	se.	do	clear.
15	,187	,156	66,6	6,3	6,7		82	65		62	,057	30,001	72,1	12,7	12,3		70	37		43				nw.	ne.	do	do
16	,200	,169	67,2	8,0	8,7		80	55		59	,061	,016	72,1	12,1	11,3		71	40		44				nw.	n.	do	do
17	,145	,120	65,1	6,8	8,0		79	60		57	,045	29,990	74,2	13,9	15,0		60	35		42				nw.	ne.	do	do
18	,171	,143	66,5	7,1	8,3		81	60		60	,057	,993	73,1	13,4	14,0		68	36		41				nw.	nw.	do	*do*
19	,155	,125	64,9	6,5	8,1		82	62		62	,025	,955	75,9	15,6	16,1		68	30		41				nw.	w.	do	do
20	,045	,000	69,,	10,1	10,6		77	47		54	29,917	,833	79,4	16,4	17,0		66	31		38				SW.	w.	fresh breeze.	do
21	,064	,014	70,7	9,8	11,1		76	50		52	,042	,871	76,3	16,2	16,5		64	28		35				NW.	N.W.	clear.	do
22	,030	29,998	65,4	8,9	9,7		76	50		52	,095	,833	76,3	17,0	16,2		63	25		34				W.	w.	do	do
23	29,996	,97	67,7	3,,	4,5		89	80		76	,909	,838	81,3	14,1	14,7		69	40		42	68,4	72,9		w.	SE.	do	do.chg.of wth.
24	,969	,938	71,9	4,3	4,6		87	77		72	,878	,804	83,5	15,3	15,9		66	37		38	69,2	73,9		w.	S.W.	do	clear.
25	,946	,905	72,5	8,7	9,1		80	55		59	,852	,771	84,3	16,6	16,7		64	35		35	68,3	70,6		w.	S.W.	do	do
26	,957	,909	75,9	11,4	12,3		73	47		48	,870	,798	82,3	13,9	14,4		70	42		43	69,5	72,3		SW.	S.W.	do	do
27	30,025	,991	70,8	11,2	12,6		71	44		44	,929	,865	76,7	16,4	17,4		62	30		33	67,9	72,2		nw.	nw.	do	do
28	,049	30,017	67,7	14,4	15,6		64	30		36	,936	,872	75,5	17,8	18,4		52	22		23	67,3	71,6		nw.	WSW	do	do
29	,050	,050	67,3	6,8	7,5			62			,980	,929	77,4	14,4	16,1		76	37		52				nw.	nw.	do	do
30	,108	,086	69,4	3,2	3,7		90	82		78	,985	,926	78,7	16,0	16,7		62	32		33	71,2	72,2		w.	nw	hazy.	do
31	,050	,026	69,6	4,3	5,7		82	75		62	,948	,890	78,6	14,1	14,8		67	37		40	70,0	73.7		N.	S. W.	foggy.	do
Mean.	30,073	30,049	69,3	8,0	8,8		79	56		57	29,970	29,912	75,3	14,4	14,4		67	34		40	68,9	72.4					

The register thermometer having been broken by a bird, the temperature of the water of the river, and of a well affected by the tides has been substituted. The dew-point was not observed this month, and the hair hygrometer is still uncertain.

JOURNAL

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I.—*Singular narrative of the Armenian king* ARSACES *and his contemporary* SAPOR, *king of Persia; extracted from the Armenian chronicles. By* JOHANNES AVDALL, *Esq. M. A. S.*

ARSACES the second, son of TIRAN, wielded the sceptre of royalty in *Armenia* in the middle of the fourth century. He was contemporary with the Persian king SAPOR, surnamed the long-lived, with whom he closed a treaty of alliance, offensive and defensive. Both were descendants of the ARSACIDAE, and thus stood related to each other by the ties of consanguinity. Distrustful of the sincerity of the friendship of ARSACES, SAPOR took the precaution of securing it by the obligation of a solemn oath. He feared a formidable enemy in the person of the emperor of *Greece*, and it was his policy to devise every means in his power to alienate from him the good-will of the king of *Armenia*. In vain ARSACES assured him of his continued attachment. SAPOR sent for the Armenian priests of the church of Ctesiphon, the head of whom was called MARI. ARSACES was induced to swear by the Gospel in their presence, to keep inviolate the profession of his alliance and friendship to the king of *Persia*.

ARSACES was a valiant, but fickle king. His bravery could only be equalled by the degree of perfidy he displayed in his intercourse with the people over whom he ruled, and with his avowed allies. Cruelty and treachery were the principal characteristics by which his acts were distinguished. For a while he continued firm in the observance

of his friendship towards Sapor, of which he afforded him a proof by co-operating with him in an expedition against the emperor of *Greece*. But, by the intrigues of one of his courtiers called Andovk, the good feeling and affection that existed between the two potentates, were changed into the deadliest enmity and hatred. Arsaces waged war with Sapor for thirty years, and fortune invariably crowned his operations with success. He owed many of his conquests to the skill, experience and intrepidity of the Armenian general Vasak, who, though of a diminutive size, on all occasions inspired the Armenian troops with courage, and created terror and dismay in the Persian ranks.

Flushed with success, and being naturally cruel, he ordered the principal Armenian satraps to be butchered in cold blood, and their estates and property confiscated. These and similar atrocities made him unpopular with his army, and estranged the hearts of the Armenian people from their monarch. Wearied by repeated hostilities, and harrassed by continued carnage, Sapor addressed friendly letters to Arsaces, inviting him to go to *Persia*, and expressing his readiness to conclude peace with him. Arsaces, however reluctant to desist from the continuance of war, was induced to accept his offer, and, in signifying his acquiescence, sent him suitable presents. But, Sapor far from wishing to renew his friendship, endeavoured to decoy Arsaces and to annihilate the kingdom of *Armenia*. Faustus of *Byzantium*, who wrote a history of *Armenia* extending to the close of the fourth century, narrates a singularly romantic story about the visit of Arsaces to the Persian king, and his subsequent adventures in *Persia*. The work of this historian was first published in *Constantinople* in the year 1730, and latterly by the Mechitharistic Society of *Venice* in 1832. I shall here give a translation of the narrative.

"Then Sapor, king of *Persia*, sent another deputation to Arsaces, king of *Armenia*, expressing a desire to effect a reconciliation. 'If,' said he, 'we are willing to be hereafter on terms of peace with each other, this wish can only be realised by a visit to me on your part. I shall be to you as a father, and you as a son to me. Should you, however, be unwilling to accept of my proposal, then I must conclude that you are still inimically disposed towards me.' Arsaces was apprehensive of visiting the king of *Persia*, without demanding the obligation of a solemn oath from him. Hereupon, Sapor ordered a little salt to be brought to him, and according to the practice prevalent in *Persia*, sealed it with a ring bearing the impress of a wild boar, and sent it to Arsaces. He also intimated, that in case the

king of *Armenia* disbelieved his oath by refusing to accede to his wishes, then that refusal would be considered as a signal for the commencement of hostilities.

"By the intreaties of the Armenian people, ARSACES was induced to acquiesce, and *nolens volens* resolved to pay a visit to SAPOR. Accompanied by his faithful general VASAK, he proceeded to *Persia*, and was conducted into the royal palace. SAPOR no sooner saw them, than he ordered them to be placed under guards and treated as prisoners. He spoke to the Armenian king with contempt, and looked upon him as a slave. ARSACES expressed his regret for the past, and stood as a guilty man before him, who directed him to be kept under the strictest surveillance.

"Then SAPOR sent for astrologers and magicians, and communicated with them about his royal prisoner. 'I have,' said he, 'on several occasions manifested affection towards ARSACES, king of *Armenia*, but he has returned my kindness with ingratitude and contempt. I have entered into a treaty of peace with him, which he swore to keep inviolate by that sacred volume of the Christian religion, which they call the Gospel. He violated that oath. I had contemplated to be uniformly kind and friendly to him, but he abused the confidence of my friendship. I ordered the Armenian priests of Ctesiphon to be summoned to my presence, from a supposition that they had deceitfully administered an oath to ARSACES, and afterwards instigated him to a violation of that oath. I considered them guilty of a heinous crime, but was assured by the high priest called MARI, of their having performed the task of adjuration in a just and becoming manner. It was also mentioned, that if the Armenian king acted contrary to that solemn obligation, the Gospel, by which he had sworn, would drag him to my feet. I could not, however, persuade myself to believe what MARI and his colleagues asserted. I ordered seventy of them to be slaughtered in one pit, and put their followers to the sword. The Gospel, by which ARSACES had sworn, and which is the fundamental rule of the Christian religion, I desired to be tied with chains and kept in my treasury. But, now I call to recollection the assertion of MARI, who intreated me to spare their lives, and assured me that the very Gospel would bring the perjurer to my feet. The prediction of that priest has been fully verified. It is now upwards of thirty years that ARSACES unceasingly waged war with the Persians, and on all occasions proved victorious. Now, he has surrendered himself to us of his own accord! Could I assure myself of his friendship and allegiance in future, I should allow him to depart in peace to *Armenia*, loaded with honors and valuable presents.'

"The astrologers and magicians required time for the consideration of the question proposed to them by SAPOR. On the following day they assembled at the royal palace and said, 'Since the Armenian king ARSACES has come to you of his own accord, we desire to know how he speaks to you, how he behaves in your presence, and what does he think of himself?' SAPOR replied, 'He considers himself as one of my servants, and lies prostrate in the dust at my feet.' The astrologers and magicians advised him how to act. 'Do what we say,' replied they: 'keep ARSACES and his general here in confinement, and send messengers to *Armenia*, with instructions to bring from that country two loads of earth and a large pitcher of water. Get the half of the floor of the royal pavilion strewed with the earth of *Armenia*, and holding the Armenian king by the hand, walk over that part of the ground covered with the earth of *Persia*, and confer with him on a subject. After which, tread with him over the earth brought from *Armenia*, and put him some questions. Thus you will be enabled to ascertain from his address and replies whether he will continue firm in his allegiance and friendship to you, after your allowing him to depart to *Armenia*. Should he, however, assume an overbearing attitude while treading on the Armenian earth, then be assured of the renewal of his hatred and enmity towards you, and of the commencement of fresh hostilities immediately after his return to his native soil.'

"The king of *Persia* adopted the suggestions of the astrologers and magicians. He despatched messengers to *Armenia* with dromedaries, for the purpose of bringing a quantity of earth and water from that country, and trying therewith the proposed experiment. In course of a few days the orders of SAPOR were put into execution. He then ordered the half of the floor of his royal pavilion to be strewed with the earth, and sprinkled with the water brought from *Armenia*, and the other half to be covered with the earth of *Persia*. He desired ARSACES, king of *Armenia*, to be brought before him apart from other individuals, and began to walk with him hand in hand. While going to and fro over the Persian earth, SAPOR asks, 'why did you become my enemy, ARSACES, king of *Armenia*? I have looked upon you as my son, and contemplated to form an alliance with you by effecting a marriage between you and my daughter, and thus to take you into my adoption. But you have armed yourself against me, and of your own free will treated me as a foe, by waging war with the Persians for upwards of thirty years.'

"ARSACES replied, 'I have transgressed the law of friendship, and must confess my fault. It was I that routed your enemies, and put

them to flight, in the hope of being honored by you with rewards. But those, who had plotted my ruin, endeavoured to estrange my heart from you, and to create dissensions between us. The oath, administered to me by MARI, has conducted me to your presence, and here I stand before you! I am your servant, professing submission to you. Treat me as you choose, or kill me. I am a guilty man, and your despicable slave.'

"SAPOR the king holding him by the hand, received his justification, and conducted him to that part of the ground covered with the Armenian earth. No sooner had they began to walk there, than ARSACES changed the tone of his voice, and had recourse to vehement and insolent language. 'Thou wicked slave,' said ARSACES, 'stand aloof from me! Thou hast usurped the throne of thy lords and masters! I must punish you for the wrongs you have done to my ancestors, and the death of the king ARTEVAN* must be revenged on you! Thou hast robbed me of my crown and country, but these must be restored to me, and your audacity shall not be allowed to remain unpunished!'

"The king of *Persia* hearing this, began to walk again with ARSACES on the Persian earth. The Armenian king then renewed the profession of his submission, expressed his regret for what he had said, and, on his knees, retracted all his expressions. But when he was conducted again to the Armenian earth, he became more insolent than before; and on his returning to the Persian earth, he repented of his temerity. From morning to evening many similar experiments were tried by SAPOR, the result whereof appeared only to be a manifestation of alternate feelings of insolence and repentance in the conduct of ARSACES.

"Evening came on, and the hour fixed for supper approached. It was usual with the king of *Persia* to entertain ARSACES on a sofa, placed next to his own throne. But on the present occasion the customary rule was not adhered to. Precedence was given to the other royal guests residing within the court of *Persia*. ARSACES was allowed to occupy the last seat, on the Armenian earth. He preserved silence for a while, burning with indignation and a desire of revenge. At last he stood on his legs and addressed SAPOR thus: 'The throne on which thou sittest belongs to me. Abandon that seat instantly. My nation have a just claim to it. Should you, however persist in your injustice, you may be sure of meeting with

* ARTEVAN was a king of *Persia*, whom ARDASHIR the Sasanian put to death, and usurped his throne.—*Vide Whiston's Latin translation of the history of Moses Khorenensis, Book II. Chap.* lxx.

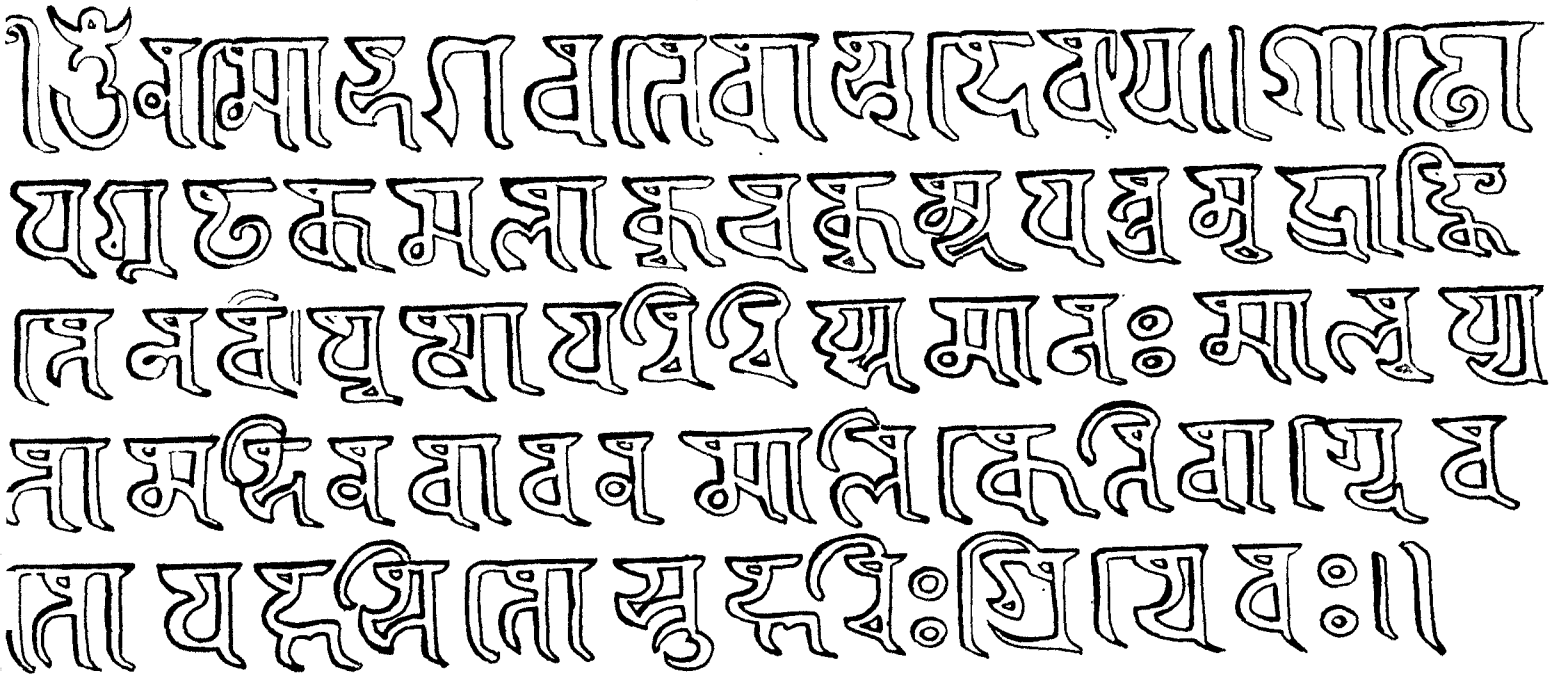
II.—*Translation of an Inscription on a stone in the Asiatic Society's Museum, marked No. 2. By Captain* G. T. Marshall, *Examiner in the College of Fort William.*

[In pursuance of our intention of making known all the inscriptions and ancient records within our reach, along with facsimiles of the characters in which they are written, we now proceed with our review of the unedited blocks in the Society's possession. Captain Marshall has kindly undertaken the task of translation in this case, and, as the letters are in perfect preservation and in the well-formed type of the Gaur alphabet, we have thought it unnecessary to insert more than a specimen of the beginning of the inscription, the full size of the original, in Plate VII. The allusion to the Gaur dynasty affords a clue to the date of the document, and on the obscure, half-defaced line at the termination of the 24th line, we think the words संवत ३२ are clearly visible, referring doubtless to the same Gaurian epoch which has been remarked in so many other similar monuments, and therefore placing the document in the 10th or 11th century. We cannot discover by whom the stone was presented to the Society. On the back of it are half cut Hindu images.—Ed.]

This inscription is without date; but the form of the letters and the names of persons mentioned will probably render the fixing of its age an easy matter to those conversant with such subjects. It was composed by a pandit named Sri' Váchaspati, in praise of a bráhman of rank and learning, styled Bhatta Sri' Bhava-deva and his family—and it would appear that the slab on which it is engraved, must have been affixed to some temple of which Bhava-deva was the founder. The individuals of this family, whose names are given, are, 1. Sávarna Muni, the root of the gotra or line.—2. Bhava-deva 1st, a descendant of the above, whose elder and younger brothers were Mahá-deva and Attahása.—3. Ratháṅga, son of the above, who had seven younger brothers.—4. Atyanga, son of the above.—5. Budha, son of the above, surnamed Sphurita.—6. Adi-deva, son of the above.—7. Govardhana, son of the above, whose mother's name was Devaki'.—8. Bhava-deva 2nd, son of the above, surnamed Bála-valabhi'-bhujanga, whose mother's name was Sángoká, and who was minister to Rája Harivarmma-deva and his son. The inscription possesses considerable interest in a literary point of view. It is written in verses of various metres, from the *Anushtup* of eight syllables in each *páda* or half line, to the *Sragdharà* of 21 syllables. The style is ambitious, and abounds in those mythological allusions and double meanings in which the Hindu poets so much delight. The execution proves the author to have been no ordinary composer.

Facsimile of an Inscription on a stone in the As. Soc. Museum.

First line, full size



Dimensions of the Slab, 3 feet by 1½ feet. marked № 2.

Prinsep lith.

Transcript of the Inscription in the modern Deva-nágari character.

ओं नमो भगवते वासुदेवाय ॥

1 गाढोपगूढकमलाकुचकुम्भपत्त्रमुद्राङ्कितेन वपुषा परिरिप्समाणः।
मालुप्यतामभिनवा वनमालिकेति वाग्देवतोपहसितोऽस्तु हरिः
श्रियै वः ॥

2 बाल्यात्प्रभृत्यहरहर्य्यदुपासितासि वाग्देवते तदधुना फलतु प्रसादं।
वक्त्रास्मि भट्टभवदेवकुलप्रशस्तिसूक्ताक्षराणि रसनाग्रमधिश्र
येथाः ॥

3 सावर्णस्य मुनेर्महोयसि कुले ये जज्ञिरे श्रोत्रियास्तेषां प्रासनभूम
योऽजनि ग्रहं ग्रामाः शतं सन्तते।
आर्य्यावर्त्तभुवां विभूषणमिह ख्यातस्तु सर्वाग्रिमो ग्रामः सिद्धल
एव केवलमलङ्कारोऽस्ति राढाश्रियः ॥

4 सत्यब्रुवः स्थितिमयो दृढबद्धमूलः शाखाग्रलग्नमुखरद्विजशीलि
तश्रीः।
न ग्रन्थिलो न कुटिलः सरलः सुपर्व्वा सर्व्वोन्नतः सुखमिह प्रससार
वंशः ॥

5 तदंशोत्तंसमणिः कलस्य दातापि तापनप्रतिमः।
भव इव विद्यातन्त्रप्रसवः प्रबभूव भवदेवः ॥

6 अग्रजानुजयोर्मध्ये महादेवाट्टहासयोः।
स जज्ञे यज्ञपुरुषोविरिञ्चिहरयोरिव ॥

7 स प्रासनं गौड़नृपादवाप श्रीहस्तिनीदिष्टमहीष्टभूमि।
अष्टौ सुतानष्टमहेभमूर्त्तिप्रख्यान् विजज्ञेऽथ रथाङ्गमुख्यान् ॥

8 रथाङ्गादत्यङ्गः समजनि जनानन्दजननः प्रशीव क्षीरोदादवि
कलकलाकेलिनिलयः।
स्फुरत्प्रज्ञाज्योतिः स्फुरित इति नाम्ना दिशि दिशि प्रकाशाढ्य
भूत्सौम्यग्रह इव बुधस्तस्य तनयः ॥

9 तस्मादभूदभिजनाभ्युदयैकबीजमद्याजपौरुषमहातरुमूलकन्दः।
श्रीआदिदेवइति देवइवादिमूर्त्तिर्मर्त्यात्मना भुवनमेतदलङ्करिष्णुः॥

10 यो वङ्गराजराज्यश्रीविश्रामसचिवः शुचिः।
महामन्त्री महाप्राज्ञमबन्ध्यसन्धिविग्रही॥

11 स देवकीगर्भभवं भुवः स्थितौ समर्थमुच्चैःपदलब्धपौरुषं।
सरस्वतीजानिमजीजनत्सुतं जगत्सु गोवर्द्धनमद्भुतोपमं॥

12 वीरश्रीषु च सभासु च तात्विकानां दोर्लीलया च कलया च वचस्विनायाः।
यो वर्द्धयन् वसुमतीञ्च सरस्वतीञ्च देधा बधत्त निजनामपदं सदर्थं॥

13 वन्द्यां वन्द्यघटीयस्य ब्रह्मणः प्रयतां सुतां।
साङ्गीकामङ्गनारत्नं पत्नीं स परिणीतवान्॥

14 तस्यां स्वप्नविधानबोधितनिजोत्पादः स देवो हरिर्जातः श्री भवदेवमूर्त्तिरमुतःक्ष्मामण्डलीकश्यपात्।
यत्पाणिप्रणयि दयङ्गलजयोरालक्षितं लक्ष्मणा यस्यान्तर्निहितोऽस्ति कौस्तुभ इति ख्यातं प्रकाशोदयात्॥

15 लक्ष्मीन्दक्षिणदोषणि मन्त्रविभवे विश्वम्भरामण्डलं जिष्णावे च सरस्वतीं रिपुतनौ नागान्तकं पक्षिणं।
चक्रम्यादतले निवेशितवता दिव्यन्तदाद्यं वपुर्निर्क्षेतुन्निजचिह्नमेतदमुना नूनं विपर्य्यासितं॥

16 यन्मन्त्रशक्तिसचिवः सुचिरं चकार राज्यं स धर्मविजयी हरिवर्म्मदेवः।
तन्नन्दने चलति यस्य च दण्डनीतिवर्त्मानुगा वहुलकल्पलतेव लक्ष्मीः॥

17 सत्यात्रस्य महाशयस्य कमलाधारस्य यस्य क्ष्मां बिभ्राणस्य गुणान्सु धैरकलितस्यान्तर्न्नदीनात्मनः।

मर्य्यादामहिमप्रसादशुचितागाम्भीर्य्यधैर्य्यस्थितिप्रायाः प्रायश्चरत्व वाक्पथमतिक्रान्ताः खदन्ते गुणाः॥

18 महागौरी कीर्त्तिः स्फुरदसिकराला भुजलता रणक्रीड़ा चण्डी रिपुरुधिरचर्च्चा रणभुवः।

महालक्ष्मीर्म्मूर्त्तिः प्रकृतिललितास्ता गिर इति प्रपञ्चः श्लक्ष्णीनां यमिह परमेशं प्रथयति॥

19 यद्वाक्षतेजसि बलीयसि मन्दवीर्य्यः खद्योतपोतकरणिं तरणि स्तनोति।

उच्चैरुदञ्चति यदीययशःशरीरे जातस्तुषारशिखरी ननु जानुदघ्नः॥

20 ब्रह्माद्वैतविदामुदाहरणभूरुद्भूतविद्याद्भुतखष्टा भट्टगिरां गभीरिम गुणप्रत्यक्षदृश्वा कविः।

बौद्धाम्भोनिधिकुम्भसम्भवमुनिः पाषण्डवैतण्डिकप्रज्ञाखण्डनपण्डितोऽयमवनौ सर्व्वज्ञलीलायते॥

21 सिद्धान्ततन्त्रगणितार्थवपारदृश्वा विश्वाद्भुतप्रसविता फलसंहितासु।

कर्त्ता स्वयं प्रथयिता च नवीनहोराशास्त्रस्य यः स्फुटमभूदपरो वराहः॥

योधर्मशास्त्रपदवीषु जरन्निबन्धानन्धीचकार रचितोचितसत्प्रबन्धः।

22 स व्याख्यया विशदयन्मुनिधर्म्मगाथाः स्मार्त्तक्रियाविषयसंशय मुन्ममार्ज्ज॥

23 मीमांसायामुपायः स खलु विरचितो येन भट्टोक्तनीत्या यत्र न्यायाः सहस्रं रविकिरणसमा न क्षमन्ते तमांसि।

किं भूम्ना सीम्नि साम्नां सकलकविकलाखागमेष्वत्र शास्त्रेष्वायुर्व्वेदास्त्रवेदप्रभृतिषु कृतधीरद्वितीयोऽयमेव॥

24 यस्य खलु बालबलभीभुजङ्ग इति नाम नाहृतं केन।

मीमांसयापि सपुलकमाकर्षितवर्षितोद्गीतं॥

25 दंष्ट्रालदुष्टभुजगग्रसनोद्धराचिप्रत्यूषतूर्य्यनिनदैरिव मन्त्रवर्णैः।
यो जीवयन् जगदशेषमभूदपूर्व्वं मृत्युञ्जयो गरलकोलिषु नीलकण्ठः॥

26 राढायामजलासु जाङ्गलपथग्रामोपकण्ठस्थलीसीमासु श्रममम्ब
पाथ्यपरिषत्प्राणाग्रयप्रीणनः।
येनाकारि जलाग्रयः परिसरख्यातोभिजाताङ्गनावक्त्राब्जप्रतिबिम्ब
मुग्धमधुपीस्यून्याञ्जिनीकाननः॥

27 तेनायं भगवान् भवार्णवसमुत्तारय नारायणः श्रीलः सेतुरिव
प्रसाधितधरापीठः प्रतिष्ठापितः।
यःप्राचीवदनेन्दुनीलतिलको लीलावतंसोत्पलं भूमेर्भूतलपारि
जातविटपीसंकल्पसिद्धिप्रदः॥

28 तेन प्रासाद एष त्रिपुरहरगिरिस्पर्द्धया वर्द्धितश्रीः श्रीमान्
श्रीवत्सलक्ष्मा हरिरिव विहितो विष्णुरुचक्रचिह्नः।
जित्वा यो वैजयन्तं वियति वितनुते वैजयन्तीविलासान् कैलासे ना
भिलाषं कलयति गिरिशो यस्य संलक्ष्य लक्ष्मीं॥

29 न्यवीविशद्देवमनि तत्र विष्णोः स निर्भरं गर्भगृहान्तरेषु।
नारायणानन्तनृसिंहमूर्त्तीर्व्विधाटवक्त्रैरिव वेदविद्याः॥

30 एतस्मै हरिमेधसे वसुमतीविश्रान्तविद्याधरीविभ्रान्तिन्दधतीः
शुतं सहि ददौ शारङ्गशार्ङ्गधरः।
दग्धस्योग्रदृशा दृशैव दिशतीः कामस्य संजीवनं कारः कामिजनस्य
सङ्गमगृहं सङ्गीतकेलिश्रियः॥

31 प्रासादाग्रे स खलु जगतः पुण्यपण्यैकवीथीं चक्रे वापीं मरकत
मणिस्वच्छसुच्छायतोयां।
मध्ये वारिप्रतिहतिमिषाद्दर्शयन्तीव तादृग्विष्णोर्धामाद्भुतमहि
कलस्याधिकं या चकासे॥

32 व्यधित विबुधधात्रः सीम्नि संसारसारं स खलु निखिलनेत्रा
नन्दनिस्यन्दपात्रं।

त्रिभुवनजयखिन्नानङ्गविश्रामधाम प्रथितरतिविभावस्थानमुद्यान
रत्नं ॥

33 तस्यैव प्रियसुहृदा द्विजाग्रिमेण श्रीवाचस्पतिकविना कृता
प्रशस्तिः ।

आकल्पं शुचिसदने सुमूर्त्तिकीर्त्तिरध्यास्तां जघनमियं सुवर्णकाञ्ची ॥

.....*

34 प्रशस्तिरियं बालबलभीभुजङ्गापरनाम्नो भट्टश्रीभवदेवस्य ॥

Translation.

Om! Salutation to (KRISHNA) the adorable son of VASU-DEVA!

Verse 1. May HARI (VISHNU), who, desiring to embrace (SARASWATI) with his body stamped with the impress of the leaves†, of the jar-like bosom of the warmly embraced KAMALÁ (LAKSHMI), was bantered thus, "Perish not this fresh garland of flowers," by the goddess of speech (SARASWATI)—prosper you!—2. O goddess of speech! since thou hast been daily worshipped from my childhood, let it now yield fruit—be propitious! I am speaking the excellent words of the praises of the family of BHATTA BHAVA-DEVA. Take thy station on the tip of my tongue!—3. The learned bráhmans who were born in the exalted and continuous line of SÁVARNA MUNI, a hundred villages, lands held by royal grants, became their abode. Among these truly *Siddhala* alone, the famed, the chief of villages, the decoration of the beauty of *Rárhá*‡, is the ornament of the regions of *Aryá-vartta*‖, (the holy land.)—4. Here this family§ hath happily spread, with excellent sprouts, honored, with firmly compacted roots, whose glory is promoted by bráhmans¶, arrived at the extre-

* From hence to the end of the 24th line there are evident traces of letters, but they are illegible. (See opening remark: the missing sentence consists of nothing more than the month (illegible) and the year, "*Samvat* 32" distinctly visible.—ED.)

† Alluding to the ancient Hindu custom of the females adorning the face and person with colored pigments, such as saffron, sandal, &c.

‡ That part of Bengal which lies on the west of the Ganges.

§ Literally, the country where holy men are constantly produced; bounded, according to MANU, by the eastern and western seas, and by the mountains Himálaya and Vindhya, (MANU, C. ii. v. 22nd.)

‖ The word वंश also means "the bamboo," and the poet throughout this verse uses such double-meaning epithets as may be made applicable to both senses.

¶ In applying this epithet to the bamboo, the word द्विज literally, "twice-born" would be rendered "birds"—first born in the egg, and secondly produced from it.

work, rendered blind (useless) in the paths of the science of law, the old expositions; and also, by making clear with his commentary the verses of the Munis on that subject, entirely removed every doubt regarding lawful actions.—23.* By whom truly that aid in spiritual knowledge, in which a thousand arguments like the rays of the sun endure not darkness, was composed according to the rules prescribed by the learned. What need of many words! this sage is unrivalled in the following branches of knowledge; viz. the *Sáma-veda* to its utmost extent, all the arts of poets, sacred science, the *Ayur-veda* (science of medicine), the *Astra-veda* (science of arms), &c.—24. By whom, indeed, is his name BÁLA-VALABHI'-BHUJANGA† not honored? —it is with extasy heard, described, and proclaimed even by *Mímángsá* (sacred science) herself.—25. Who (BHAVA-DEVA), bringing to life a whole world by means of his mystical incantations, which resemble the morning clang of instruments breaking the night of unconsciousness caused by the bite of a fanged and rabid serpent, has become an unequalled MRITYUNJAYA (conqueror of Death, a name of SIVA), in sporting with poison, another NILA-KANTHA, (blue-throat‡, another epithet of SIVA.)—26. By whom was formed in *Rarha*, in the arid boundaries of land bordering a village situated on a wild road, a reservoir of water which fills the water-jars, the desires and the minds of travellers sunk in fatigue; and of which the beds of lotuses are abandoned by the bees fascinated by the reflected shadows of the lotus-like faces of beauteous damsels who have bathed on its banks.—27. By him this stone (image of) the adorable NÁRÁYANA (VISHNU), by which the face of the earth is adorned, was fixed like a bridge for crossing the ocean of material existence. Which, being the dark-blue frontal mark of the moon-like face of the eastern quarter, is to the earth (as it were) a lotus used sportively for an ear-ring, the *Párijáta* § tree of this world, the bestower of completion of designs.—28. By him was erected this splendid temple, whose glory is exalted in emulation of the mountain of (SIVA), the destroyer of *Tripura*, and which like HARI (VISHNU), is distinguished by the mark called

* This verse is in the Sragdharà metre of 21 syllables in each páda or half line.

† The meaning of this surname is not apparent: it is compounded of three words, बाल "young, ignorant," &c. वलभी "the frame of a thatch, a turret;" also I believe the name of a city and a dynasty, and भुजङ्ग "a snake, an adulterer."

‡ SIVA is said to have swallowed the poison produced among other things, at the churning of the ocean; the only effect it produced on the god was a blue mark on his throat, whence this epithet. This verse celebrates BHAVA-DEVA'S excellent knowledge of antidotes.

§ The name of a celestial tree which grants all desires.

*Srí Vatsa**, and by the trembling discus. Which (temple) having overcome *Vaijayanta*, (the palace of INDRA,) waves out a flag in the sky. Beholding the beauty of which temple, GIRISHA (SIVA) no longer desires KAILÁSA.—29. He (BHAVA-DEVA), placed in that house of VISHNU, in the innermost sanctuaries, the images of NÁRÁYANA, ANANTA, and NRISINGHA, as the vedas in the mouths of BRAHMÁ.—30. He gave to this (temple, an) offering to HARI† a hundred damsels, with eyes like those of a young deer, who are mistaken for celestial dancers sojourning on the earth, who with a glance restore to life KÁMA, although he was burnt up by UGRA-DRIK, (fiery-eye, i. e. SIVA,) who are the prison-houses of the impassioned, the abode of melody, dalliance, and beauty united.—31. He truly made in front of the temple a pool, which is a market of purity alone, the water of which is pure and sparkling as an emerald, which, displaying under the form of a reflection in the water, the exact scene of VISHNU's deceiving the Hydra‡, appears most splendid.—32. He on all sides of the temple formed an excellent garden, the quintessence of the earth, the vessel into which the delight of all eyes distils, the place of repose of ANANGA (the god of Love) wearied with the conquest of the three worlds.—33. This eulogium was composed by his dear friend, the learned SRI' VÁCHASPATI, the chief of Bráhmans. Let this golden zone, like a beautiful form of fame, remain on the loins of this pure edifice until the destruction of the world!

. . . . . [in the year 32.]

This eulogium is upon BHATTA SRI' BHAVA-DEVA, surnamed BÁLA-VALABHI'-BHUJANGA.

* A peculiar mark on the breast of VISHNU, said to be a curl of hair twisting to the right.

† The compound word हरिमेधसे here translated "an offering to HARI," has given much trouble; and the sense at last adopted does not appear very satisfactory. The word मेधस् is not found in Dictionaries: it is substituted by a grammatical rule, for मेधा "understanding;" but only when compounded with a negative, or with दुर, सु, मन्द, or क्षुद्र. The meaning here given is thus arrived at, the word मेध is given in WILSON as meaning "an offering," and is derived from the root मेध् by adding the affix अप: it has therefore been supposed that this word मेधस् may be formed by affixing असुन् to the same root, with the same meaning.

‡ Referring to the story of KRISHNA's conquering the one hundred and ten-headed serpent Káliya in the river *Yamuná* near *Vrindávana*.

III.—*On the explanation of the Indo-Scythic legends of the Bactrian Coins, through the medium of the Celtic.* *By Dr.* J. SWINEY.

[In a letter to the Editor.]

Aware how much the Journal has forwarded the successful pursuit of Indian antiquities, I might have chosen to address its Editor solely on that account. I deem him, however, to have further claim to precedence in having been the first to decipher the ancient character, so recently brought to light by the discovery of what have been styled Bactrian coins, for want, perhaps, of a better name. I shall proceed then to offer you a few observations upon two or three of these coins, the legends of which have as yet been unexplained—premising, that in a path so untrodden, every new aid, from whatever source it may proceed, (providing it have antiquity on its side,) must be welcomed in the pursuit.

It is with this view, if I mistake not, that you have sought to adapt the Zend to the Sanscrit of the present day—and that the Parisian Secretary has chosen for his guide the ancient Syriac, to which, in all probability, he had recourse, from the frequent occurrence of the word *Malka**, both on coins and inscriptions. The key I propose is the Celtic—a name given to a language now only known by its remains, preserved to us by various *hordes* of men settled in Europe, it is true, but for whom the learned of every age have claimed an eastern descent and high antiquity. What advantages the Celtic may possess over the Zend and the Syriac in unravelling Bactrian terms, remains to be proved: it will be admitted, however, by the examples I am about to give, that something more than a verbal coincidence of terms has been ascertained. The first coin I shall notice, and which indeed was used as the touchstone of the system, (after reading that the word "Pisergird" was as good Welch as it was Persian,) is that of Colonel STACY, given in your November number:—on this is seen the usual device of the god *Lunus*, with the Greek letters AOH, instead of MAO: it was immediately discovered that the Welch dictionary gave *Lloer*, the moon; which led to a reference to the great "Vocabulaire Celtique of M. BULLET," which gave *Loer* Lune; and on consulting what the author says on the value of letters in Celtic, the following notice was found:—"R placée ou omise indifferemment à la fin du mot—exemple: Dwr = Dw = eau" All this proving satisfactory, another legend was tried by the same test—namely, the "OAΔO" upon coins of the naked running figure, so common among the Bactrian series. Here the Celtique renders *Oad* and *oed*,—âge, temps, adding ætas, Latin; giving every reason to believe

* On the contrary, M. JACQUET reads the word for king, not *malka*, but *mirva*, the equivalent in Syriac, we believe, for "dominus."—ED.

that the figure is no other than *Kronos*. Hitherto, if I mistake not, this device has been identified with Hercules in his character of "The Sun" running his course; and thus we find in ANTHON's edition of LEMPRIÈRE's Classical Dictionary, Art. Hercules, Bactrian and Parthian coins expressly mentioned having figures of the Phœnician Hercules*: the word "fugiens" of VIRGIL's description of the god *Saturnus*, might have, however, suggested him as the personage meant in his character of *Kronos*; and, indeed, the former is to be met with in some illustrations of the god, much in the same nude and running attitude as that in which he is seen upon the coins. VIRGIL says—

> "Primus ab æthereo venit Saturnus Olympo,
> Arma Jovis fugiens et regnis exul ademptis."

On looking over the Vocabulary given in the Zendavesta, "Vedna" is given as *P'chlevi* for tems—this seems the same (perhaps in the genitive case) as "oed" of the Celtic Vocabulaire.

Another remark may be considered to be called for on this coin. M. BURNOUF, as noticed already in the Journal, alludes to the peculiarity of the Zend words ending with "O" final; and thus it may be observed that the OAD of the book becomes OADO on the coin, as NAN of the book becomes NANO of the coin.

Again, the legend that runs through whole series of these old coins is RAO NANO RAO, accompanied, I believe, in some instances, with a Greek translation on the opposite side of the coin of ΒΑCΙΛΕΩC ΒΑCΙΛΕΩΝ†. This left no doubt of the meaning of the phrase, being equivalent to *Malkan Malka* of another series—still the word NANA was not made out very satisfactorily; whereas the Celtique Vocabulary has "*na, nan* article du genitif;" thus word for word—king of kings. With regard to *Rao*, there is no difficulty—"*Ro-ard*" being given as "supreme souverain" precisely in the same sense as "*ard*" is found on the coins—ex. gr. "*ard-okro*," "sol supremus‡."

* The remark in LEMPRIÈRE doubtless alludes to the reverse of the coins of EUTHYDEMUS. Those of HERMÆUS and some other of the new names would equally bear out the expression, without including the OAΔO reverse, which certainly has as much analogy to *Buddha* or *Woden*, as OKPO has to *Arka*, &c.—ED.

† The title *rao* is substituted for *basileus*, and *rao nano rao* for *basileus basileôn*, on precisely similar coins, but we do not know of any instance in which they occur together.—ED.

‡ The explanation of *nano*, as a genitive affix before *rao*, is perhaps the most plausible of these Celtic elucidations—but the Vocabulaire does not call *nan* the *particle* of the genitive, but the *article* of that case; and we find in "PRITCHARD's Celtic nations" in the declension of *an bard*, a poet, the nominative plural, *na baird*; genitive, *na mbhard*, dative, *o na bardaibh*, &c. So that, in the Erse dialect at least, *na* is the general article in the plural, as is *an* in the singular. See observations on this word in Vol. III. p. 448.—ED.

The σωτηρ of the coins, according to my book, should be *kada-dao*, signifying *Sauveur, Defenseur*, which accords well with דרדך.

The μεγαο seems to read *rarao*—that is. tres grand, from "*ra*—grand," duplicated, and therefore perhaps the vowel is repeated דרארצך; or "*ra*, grand," and "*re*, pour le superlatif;" thus, "*bras* elevé;" "*re-bras*, fort elévé." Vide Celt. Vocab.

Another coincidence and to conclude. A coin of Lysias has on the Greek side ΑΝΙΚΗΤΟΣ—literally, "not-vanquished." On the opposite side of the coin is the native legend which you have rendered "*apatilo*," for which the Vocabulaire gives—"*ap*, sans"—"*atela*, combat, confusion."

The instances of "*ap*" being used for "sans," or for the Greek "α privatif" in the Celtic, are numerous, and the Zendavesta gives the following three instances: "*apos—aposan*—(*ap*—sans; *os*—petite)—qui est sans enfans;" "*apetiare*—sans mal;" "*apatkar*—qui ne parle pas, (*ap*—sans; *padkar*—paroles.") Vide Pehlevi Vocab.

All this may appear to us very new, shut out as we are from access to numerous glosses to be found mouldering on the shelves of every national library in Europe; but we shall cease to be surprised when we read that the author professes to have drawn his *material* from such sources as "les restes de l'ancien Indien, de l'ancien Persan, &c.

It remains, however, to be regretted that the vocabulary is not easier of being consulted by the reader, and still more that no references are given to individual passages; for in one place, at least, he cites a word as belonging to the *Bactrian* language.

Note.—We have with pleasure inserted Dr. Swiney's Celtic illustrations, although we hardly think it was necessary to go so far north for an explanation of our Indo-Scythic legends, when the Sanscrit, in most cases at least, furnishes as close an agreement: and the connection of the Celtic with the latter has been traced by philologists with as much plausibility, as the more obvious derivation from the same source of the Greek, Latin, Teutonic and other European fundamental languages. Had Dr. Swiney fallen upon the following passage in Griffith's Animal Kingdom, order Ruminantia, page 411, which has by chance just met our eye, he might have found in it a wonderful support of his theory.—"The cow is repeatedly a mystical type of the earth in the systems of ancient Greece, or a form of Bhavâni with the Hindus, and still more marked in the *lunar arkite* worship of the Celtic nation." The coincidence here with the reverses on the inferior Kadphises type of coins which bear the taurine figure surmounted by the word OKPO, is sufficiently striking: yet we cannot imagine in it more than an accidental similarity of words—so far, indeed, not fortuit-

ous that the Celtic worship of the celestial bodies may be traced in a general way to the ancient Mythos of Central Asia, whence the people themselves may have originally emanated, but from which they had been disconnected for ages anterior to the time of JULIUS CÆSAR, and à fortiori long before our Indo-Scythic coins were struck.

The legend of Col. STACY's last coin, AOH, has given rise to a variety of conjectures :—the possessor supposes it a date,—but the only way in which it could be thus read, as Capt. CUNNINGHAM points out, is by supposing A to stand for ΛΥΚΑΒΑΝΤΟΣ, as on the Egyptian coins, A OH *anno* 78. For ourselves we still maintain that, as the obverse legend is evidently a mere jumble of the title BACIΛEΩC BACIΛEΩN, there can be no hesitation in pronouncing AOH a similar jumble of HAIOC, rather than of any other of the known reverses, which, it will be remembered, do not appear until the Greek titles of the king give way to the indigenous appellation RAO. On receiving the *Journal des Savans*, we searched through M. RAOUL DE ROCHETTE's papers on the *Honighberger* and *Ventura* collections with avidity, to see how he would read these curious legends, and were at first mortified by finding that he dismissed them as "letters apparently resembling Greek"—then, as fit topics for "*Indianistes*—being out of the department of his own studies." In the number, for *Mai* 1836, however, we are happy to find that our own readings of *Okro, nanaia, mao*, &c. are confirmed by the learned German Professor of *Gottingen*, M. K. OTT. MULLER; to whom M. R. DE ROCHETTE awards the merit of reading a gold coin of *Kanerkes* in the French cabinet which he had left untouched;—"le revers, APΔOKPO semble ne pouvoir s'expliquer, comme l'a proposé aussi tres ingénieusement M. K. OTT. MULLER, que par le mot Sanscrit OKPO combine avec une seconde racine Sanskrite."—ED.

IV.—*On three new Genera or sub-Genera of long-legged Thrushes, with descriptions of their species. By* B. H. HODGSON, *Esq.*

MERULIDÆ, CRATEROPODINÆ; *Aipunemia ? Tesia*, nobis; *Tee-see* of the Nipalese.

Bill shorter than the head, straight, and with the nares* perfectly Cincline. Wings very feeble, and quite round. Tail nearly obsolete.

Rictus and capistrum smooth. Tarsi very high, slender, and quite smooth. Toes and nails *moderate, slender*, and compressed.

1st Species. *Cyanicterus*; black-headed, nobis. Above, medial grass green: below, slaty blue: bill, horn color: legs, fleshy grey: iris, brown: $3\frac{3}{4}$ inches long by $5\frac{1}{2}$ wide: weight $\frac{1}{3}$ of an oz.: sexes alike.

* In *Aipunemia* the covering of the nares is corneous: in *Tesia*, it is pure membrane. In the former, again, the tarsal scales are apparent; whilst in *Tesia* there is no trace of them.

2nd Species. *Flaviventer;* yellow-bellied, nobis. Above, grass green: below, full yellow: mask covering the face and ears, bright chestnut: bill, dusky above, fleshy below: legs, fleshy white: iris brown: size of the last: sexes alike.

3rd Species. *Albiventer*, nobis. Above, olive brown, dotted with buff. below, white, each plume being largely marked in the centre with dusky-brown: bill, dusky horn with a fleshy base: legs, brown: iris, brown: $4\frac{1}{2}$ inches by $7\frac{1}{2}$, and $\frac{3}{4}$ oz. in weight: tarsi rather lower and stouter, and bill rather stouter than in the preceding species, which are the typical ones.

4th Species. *Rufiventer*, nobis. Above, olive brown, as in the last, but less dotted: below, rufous picked out with dusky, as in Albiventer: legs, fleshy brown: bill dusky horn: iris, brown: size of the last, from which this species differs only (but permanently) by the ruddy ground color of the inferior surface.

Remark. These little birds have a very strong muscular stomach, and feed on hard grass seeds and hard minute insects. They procure their food entirely on the ground, and live in woods exclusively. They are almost equally common in the central and lower hilly regions: in the northern I have not found them.

CRATEROPODINÆ. Genus *Larvivora*, nobis.

Bill equal to head, subcylindric, straight and slender; at base rather broader than high, and gradually narrowed; ridge considerably keeled: upper mandible rather longer than the lower, and vaguely inclined and notched.

Rictal and nuchal hairs small and feeble. Wings, tail, and nares as in *Turdus*, but the two former somewhat less developed.

Tarsi elevate, slender, nearly smooth: toes, all of them, compressed; lateral fores and hind sub-equal; exterior fore connected to the first joint. Nails, moderately arched and rather acute.

1st Species. *L. Cyana;* blue *Larvivora*, nobis. Above, full blue: below, bright rusty, paler and albescent towards the vent and under tail-coverts: thighs, blue with white cross bars: cheeks, black: superciliary line, white: bill, dusky horn: legs, fleshy grey: iris, brown: 6 inches long by $9\frac{1}{4}$ wide, and $1\frac{1}{4}$ oz. in weight: sexes alike.

2nd Species. *L. Brunnea;* brown *Larvivora*, nobis. Above, brown: cheeks and sides, rusty: below, white: bill, dusky horn: legs, fleshy grey: iris, brown: sexes alike: size of the last.

Remark. These birds differ conspicuously from *Tesia* (SWAINSON'S *Aipunemia ?*) by stronger wings and tail, by their less cylindric and less entire bill, and by their open meruline nares. They have much of the aspect of the *Sylviadæ*, but are essentially terrestrial. Do they not constitute the oriental type of the American *Drymophilæ ?* and do

they not serve, in a remarkable manner, to connect the *Merulinæ* and the *Crateropodinæ?*

They are common to all the three regions of *Nipál*, and never quit the woods. They perch freely, but are usually on the ground. Their stomachs are feebler than in *Tesia*, and they do not take seeds or gravel. From the number of insect nests and larvæ found in their stomachs, I have called the genus *Larvivora*.

Crateropodinæ. *Paludicola*, nobis. *Syimya* of the Nipalese. Habitat central and lower regions.

Character :—Bill scarcely longer than the head, stout, hard, entire, much higher than broad, sub-arcuated throughout, with both tips inclined downwards and obtuse. Tomiæ, beyond the nares, deeply locked, trenchant and scarpt internally.

Nares, meruline, but nearly or wholly hid by setaceous plumuli. Rictus, smooth. Frontal and chin plumes rather rigid. Wings, feeble rounded and bowed; primaries and tertiaries equal; fifth and sixth quills longest and sub-equal; the three first conspicuously gradated. Tail short, square, and bowed, not feeble. Tarsi very elevate, slender, nearly or quite smooth. Toes compressed and meruline; outer fore connected beyond the joint, hind sub-equal to inner fore, considerably less than the central fore, not depressed. Nails straightened and blunt; hind largest. Knees nude, tibiæ plumose.

Remark. These birds never quit the forests, and usually adhere to those parts of them which abound in thick low brush-wood. They seldom perch save at night, and then only on low bushes. They feed principally in swamps and rills, upon the hard insects proper to such sites. Berries and seeds they seldom or never touch: and the sand occasionally met with in their stomachs is probably taken unintentionally. Their tongue and intestines resemble those of the Thrushes proper, with only a considerable increase in the length of the intestinal canal, which is sometimes 30 inches long. They fly so ill and are so stupid that I have seen them taken by a single man. They are much allied in manners and in structure to the *Myotherine Pittæ*, but they appear to me, upon the whole, to belong to the *Crateropodinæ**, though I apprehend that the details of that sub-family call for much further investigation on the part of its able institutor, who, I am persuaded, will discover that *Cinclosoma* and *Pomatorhinus* constitute large and independent groups or genera, distinguished by marked peculiarities both of habits and of structure.

Species new. *Paludicola Nipalensis*, nobis.

Body, wings and tail, superiorly dark obscure green, shaded with

* Richardson's North American birds, page 156. At page 488, Mr. Swainson is disposed to make *Cinclosoma* and *Pomatorhinus* sub-genera of *Crateropus*!

rufous brown: quills and tail feathers more saturate: wing coverts with large buff drops at the end of each plume: remiges and rectrices, internally dusky: the 4 or 5 first quills of the wings paled at their bases on the inner web: lining of wings, mixed buff and dusky: forehead, face, neck, and body, below, brownish rusty, picked out on the under tail-coverts with blackish, and deepened on the thighs and sides into fulvous brown: nape and dorsal neck, dull azure or verditer blue: chin frequently hoary: behind each ear a triangular black spot, united anteally by a gular band of the same hue: iris, brown: bill, dusky above, fleshy towards the commissure and inferior base: legs, ruddy flesh color: nails, horny white: size 9 to 10 inches by 15, and 5 to 6 oz. in weight.

N. B. Sexes essentially alike, but the female paler; her gular band broken or interrupted; and her wing coverts frequently unspotted. The males, too, want these spots, except when they are in full plumage: the bright brownish rusty hue of their forehead cheeks, and body below, fades to a fulvous or dull fawn color in winter: and the tail coverts are then immaculate. The lower belly and vent are paler than the breast, and frequently albescent.

V.—*Description of three new species of Woodpecker.*

By B. H. Hodgson, *Esq.*

Humboldt asserts and Swainson repeats that there are no such forests, or native tenants of the forest, as those of the New World. But he who has tracked the wild elephant and bison through the colossal avenues of the Saul (*Shorea Robusta*), or the *Ghóral* and *Jháral**, through those of the *Deodár (Pinus Deodara)* of India, may perhaps be permitted to doubt this. If the forests of America are 'lofty and interminable,' so are those of the sub-Himálayan mountains, from the skirts of the Gangetic plain to the very edge of the perennial snows. The zoological treasures of India may be less celebrated than those of *America—carent quia vate sacro*—but it is by no means probable that they are less worthy of celebration. Swainson's observation, above referred to, has reference more especially to the Woodpecker tribe; in respect to which he avers that the pre-eminently typical species are exclusively American. But this is a mistake: the sub-Himálayan forests afford several such species, one of which rather exceeds, than falls short of, the famous ivory bill (*Picus principalis*) of *America*. My collection of Nipalese Woodpeckers already embraces 16 species, which exhibit every known modification of form. I propose at present to describe the most powerful and the

* *Capra Quadrimammis*, nobis, and antelope *Goral*.—Hardwicke.

feeblest of these, as well as one intermediate species; beginning with the largest and ending with the least.

Picianæ. Genus *Picus Auctorum*, sub-genus *Picus*, Swainson. Species new. *Picus Sultaneus*, Royal Indian Woodpecker, nobis.

This noble bird, facile princeps among the oriental Woodpeckers, and second to none in the world in size, strength, and typical attributes, is 15 inches long by 23 wide, with a weight of from 8 to 9 ounces.

Form. Bill $2\frac{1}{2}$ inches long, a third longer than the head; at base higher than broad; the ridges sharp and straight; the sides strongly angulated; the tip perfectly wedged: extremely powerful and hard throughout: great lateral angle of the maxilla, extending centrally from the base three-fourths to the tip, where it is taken up by two smaller angles proceeding ascendantly to the cuneate point, and serving as ribs to fortify it*: lower mandible with the sides subangulated after the manner of the upper; its point similarly wedged, but with only one terminal rib instead of two. Nares, elliptic, lateral, closed superiorly by the ledge of the great lateral angle of the bill; vaguely membraned, and more or less free from the nuchal tuft of plumes: orbits, nude: head, large and broad with a pointed crest: neck, slender and uncrested: tarsi longer than the anteal, shorter than the posteal, outer toe: the latter toe conspicuously the longest: the grasp extremely oblique, with the two hinder toes directed laterally outwards, and capable of being brought to the front. Talons very falcate, acute, and angulated beneath near the tips: wings, medial, reaching nearly to the centre of the tail: 5th quill longest: 4th and 6th sub-equal to it: 1st, three inches, and 2nd, one inch less the 5th: primaries plus the tertiaries, one inch. Tail, extremely strong, moderately wedged: the six central feathers with the shafts bent inwards, and the webs very spinous; the laterals similar but less strong; the tips of the whole bifurcate.

Color. Top of the head and lower back, carmine: upper back and wings, externally golden yellow: band from the eyes round the forehead, ruddy brown: neck, from the eyes, laterally, black; anteally and posteally, white, with five black gular stripes on the anteal aspect: breast black with large central drops of white, more or less brunescent: rest of the body below, and lining of the wings, white, transversely barred with black: rectrices and their upper coverts, pure

* In no other species have I noticed more than one sub-terminal lateral angle; nor is there any other, with the power this possesses, of directing the whole of the toes to the front. The better to shew the pre-eminence of this species, I will add to my paper the description of another belonging to the same sub-genus. See *Pyrrhotis* in the sequel.

black: wings internally, and the primaries wholly, blackish, with 3, 4, or 5 ovoid white spots, ranged barwise across the inner webs of all the feathers:—Female, the same; save that her cap is black, with a white drop on each plume: bill and legs slaty, with a greenish or yellowish smear: nails dusky: iris, carmine in the male, orange-red in the female: orbitar skin, green in both: 15 inches long by 23 wide, and 8 to 9 oz. in weight.

N. B. The young at first resemble the female, and the males do not assume their perfect plumage till the second or third year. Black is the prevalent *under*-color of the species, and may be seen, unmixed, beneath the carmine crest of the males, and mixed with white, disposed barwise, beneath the carmine of their lower backs. This species breeds once a year, in May. It moults also but once, between June and October, both inclusive. There is another Nipalese species scarcely distinguishable from this by colors, and which has been confounded with it by those who venture to describe from one or two dried specimens. The two species differ, however, toto cœlo in all typical and characteristic respects.

Sub-genus Dryotomus. Species new: *Flavigula*, yellow throat, nobis.

Form. Bill $1\frac{3}{4}$ inch, a fourth longer than the head; at base as broad as high, and soft in the lower mandible; the ridges scarcely straight or acute; and the tips very imperfectly wedged: great lateral angles of the maxilla, short and raised to the level of the culmen, giving the latter towards the base of the bill a character of flatness and breadth observable in no other sub-genus: nares shaped as in the preceding, but unprotected above by a corneous ledge, and usually quite hid by the nuchal tuft: orbits, nude: head, less broad and not crested: neck fuller, shorter, and, with the nape, crested posteally: tarsus rather longer than the anteal outer toe, which is distinctly larger than the posteal one: the grasp almost direct; and the two posterior toes wholly incapable of being brought to the front, or even of acting laterally: talons powerful as in the last and similarly angulated beneath: wings and tail with the general characters of the last; only rather more elongated and the latter feebler: 5th quill longest: 1st. $3\frac{1}{4}$, and 2nd, $1\frac{1}{4}$ inches less the 5th: primaries plus tertiaries $1\frac{1}{4}$ to $1\frac{1}{2}$ inch: tail much pointed and conspicuously wedged.

Color. Above brilliant parrot-green, duller on the top of the head, and merged in brown on the forehead: back of the neck, glossy silken yellow: chin and throat, pale greenish yellow: neck, to the front and sides, black green, picked out with pure white, which co-

lor occupies the bases of the plumes: body below, slaty grey with a green smear: wings internally, and the primaries wholly, igneous cinnamon, with five or six blackish cross bars occupying both webs of the primaries, but the inner webs only of the secondaries and tertiaries: tips of the primaries, black brown: rectrices, pure black: lining of the wings, whitish with black bars—the ground color tinged with the proximate lines: the bill, white with a plumbeous base: feet, plumbeous or slaty blue: orbitar skin, green: sexes alike: immature birds have the chin and throat brown like the forehead: 14 inches long by 21 wide, and 6 to 7 ounces in weight.

YUNXINÆ*.

Genus or sub-genus new. VIVIA, nobis. *Wee-wee* of the Nipalese.

Generic character:—

Bill shorter than the head, straight, conical and acuminated: tip of the upper mandible, sub-wedged—of the lower, pointed.

Nares rounded, and hid by the nuchal tufts. Wings to middle of tail; 1st quill and sub-bastard, 2nd long, 5th longest: all entire: primaries longer than tertiaries, $\frac{1}{4}$ inch.

Tail medial, soft, 12†, the six centrals, even: the six laterals, extremely gradated: tongue and feet *picine*; the anterior and posterior outer toes equal to each other and to the tarsus.

Species new. *V. Nipalensis*; Nipalese *Vivia*, nobis.

Form, has been accurately described in the generic character.

Color. Above, greenish yellow, darker and duller on the head, dorsal neck, and ears: below, white, tinged with yellow, and ocellated from the chin to the breast—cross-barred thence to the tail, with black: two white lines down each side the head and neck, from the bill to the shoulders, enclosing the eyes and ears between them: frontal zone, pale and yellow: rectrices, the two central, black on one web, white on the other; the four next wholly black; the rest paled on the outer webs and tips: wings, dusky brown internally, and void of bars; towards the base paled: males with a chesnut forehead, dotted with black: females with a saturat· green forehead, concolorous with the upper surface of the head and neck: sexes of same size: 4 inches long by $7\frac{1}{2}$ wide, and $\frac{1}{2}$ an ounce in weight.

Remarks. These singular little birds are clearly distinguishable from the genus *Yunx (Auctorum)* by their *Picine* tongue and by the

* With the general reader no apology will be necessary for describing the following little bird as a Woodpecker. The *Yunxinæ* sub-family can hardly boast a generally-admitted independence.

† All the 12 are ranged in regular series, without any sign of the anomalous disposition noticeable in the extreme laterals of all the *Piciane*.

structure of their wings, which also assimilates them with several of the smaller species of Woodpeckers. Whether they ought to be ranged under the genus *Picummus* of Temminck, I have no means of ascertaining. I leave my proposed new genus or sub-genus to the discretion of the skilful, who have access to the libraries and museums of Europe.

Picianæ*.

Sub-genus *Picus*, Swainson. Species new. *Pyrrhotis;* crimson-eared, nobis.

Form. Bill two inches long, a third longer than the head: extremely powerful and hard throughout: at base higher than broad: the ridges sharp and straight: the sides strongly angulated: the tips perfectly wedged: great lateral angle of the maxilla extending centrally three-fourths to the tip, where it is taken up by a single cuneating angle: lower mandible not angulated like the upper in its body, but similarly so towards its cuneate point: nares and head as in *Sultaneus*, but the latter not crested: neck neither elongated nor slender; void of crest: tarsi sub-equal to the anteal outer toe, which is rather larger than, or equal to, the posteal one: grasp rather oblique, the posteal toes being directed obliquely outwards, but incapable of reversion to the front: talons powerful, but only sub-angulated beneath: wings medial, reaching to middle of tail, gradated and formed, as in *Sultaneus:* tail rather short, very moderately wedged; in structure similar to that of *Sultaneus:* orbits nude.

Color and size. Wings, lower back, and tail, dark cinnamoneous or chesnut red, transversely banded with black throughout: head, neck, and upper back, brown, merged more or less in dark vinous red; the forehead and chin paler, and greyish: the breast and body below, black brown, with narrow chesnut bars on the thigh and tail-coverts: behind each ear a brilliant crimson spot: bill, bright yellow: orbitar skin, dusky green: iris, brown: legs, dark slaty, smeared with green or yellow: nails, dusky horn: sexes alike: 12 inches long by 18 wide; and 5 to 6 oz. in weight.

Remark. Though I have ranged this bird under Swainson's sub-genus *Picus*, the curious reader will observe that it does not wholly answer the definition of the group. It belongs, in fact, by its bill to *Picus*—by its feet to *Chrysoptilus:* and, strictly speaking, stands midway between the two sub-genera. The two exterior toes are, as nearly as may be, equal; but the bill is neither depressed nor are the great lateral angles of the maxilla unequal. My principal motive

* See the note on *Sultaneus* for the cause of this addendum.

in adding it to this paper is (as already stated) to afford an object of comparison with the kingly species which is first described under the oriental imperial style of *Sultaneus*.

And, now that I have exceeded the limits originally proposed, I may as well add the description of another species forming a complete link between the three and four-toed *Picianæ*.

Genus MALACOLOPHUS ?

Sub-genus ?

Species new. *Melanochrysos*; golden and black Woodpecker, nobis.

Form. Bill $1\frac{1}{2}$ inches long, scarcely one-fifth longer than the head, at base as high as broad, neither compressed nor depressed; ridge arcuated and acute, but not carinated; great lateral angles obsolete, tips faintly cuneated.

Nares, elliptic, void of corneous ledge above, more or less denuded of plumes. Wings medial, to middle of tail: 1st quill, sub-bastard; 2nd, long; 4, 5, and 6, sub-equal, and longest. Tail, medial, equally gradated throughout, straight, rather feeble; tips of all its feathers pointed, or evanescently forked: tarsi, longer than the anterial outer toe, which is conspicuously larger than the posteal: the inner, small but perfect, and furnished with a perfect nail: grasp not oblique: orbits nude: head with a full soft crest, more or less pointed at the occiput: neck simple*.

Color and size. Chin, throat, abdominal aspect of the neck and the breast, black: neck, posteally, black: lores, cheeks and lateral aspect of neck, white: ears, black, in a broad stripe from the eyes: upper back and wings, golden yellow: shoulders, dusky: lower back, tail-coverts above, and tail, black: wings internally, the same: body below, white: cap, in the males, bright sanguine; in the females, black, with white streaks: bill, slaty black: iris, brown: orbitar skin, dusky green: legs, clearish green: talons, dusky: $11\frac{1}{2}$ to 12 inches by 18: $4\frac{1}{2}$ ounces.

Remarks. This species in size, colors and characters, bears much resemblance to the *Picus Shorii* of GOULD's work, in which, however, the fourth digit is nailless and obsolete, the rump, crimson, and the neck and belly, as in our *Sultaneus*.

I have other species serving to unite the 3 and 4-toed Woodpeckers by an insensible gradation. These species are closely connected with the well known *Picus Viridis* and *Picus Canus* of Europe.

* The tips of the lesser quills offer no peculiarity of structure, either in this or the preceding species.

VI.—*Indication of a new Genus of Insessorial Birds.*

By B. H. HODGSON, *Esq.*

CONIROSTRES. LAMPROTORNINÆ? DENTIROSTRES, CRATEROPODINÆ? LEIOTRICHANÆ?

Genus CU'TIA, nobis.

In the suite of specimens of Nipalese birds forwarded by me, three years ago, to the Zoological Society of London, were three or four of the subject of the present article.

They were marked in the imperfect list obligingly returned to me, as a "new form nearly allied to *Pastor*." But, if *Pastor Roseus* be the type of that genus, I confess I cannot perceive much resemblance to our bird: and, if a strong arched compressed bill, united with gradated wings and very strong feet, be the marks of the *Crateropodinæ*, to that sub-family, I conceive our bird should be referred, unless the sub-scansorial and *quasi-Parian* character of its feet do not rather affine it with the *Leiotrichanæ*. And, certainly, its wings, tail, and feet have no small resemblance to those of *Pteruthius*, though its bill be totally different and formed very much upon the *Timalian* model.

The true station of our bird can only be determined by a more accurate knowledge of its habits and economy, than I now possess, applied to better and fuller information than I have any means of here acquiring, respecting the *general* affinities and analogies of the *Insessores*.

What adds to my difficulty in attempting to class the bird according to the *Sturnine* relations suggested to me, is, that the so called *Pastor Trallii* (very abundant in *Nipal*) is, in my judgment, a typical *Oriole*, whilst the *Lamprotornis Spilopterus* (also common here) is not easily referable to TEMMINCK's genus *Lamprotornis*, and belongs, I shrewdly suspect, to the *Brachypodinæ* of SWAINSON. Without further preface I shall now attempt to characterise our bird as the type of a new genus, but with the necessary prolixity resulting from hesitation as to its family and sub-family.

CUTIA, nobis.

Khatya (quasi pedatus) of the Nipalese.

Bill, equal to the head, or less, at base as high as broad, arched and compressed throughout, strong, obtuse, and nearly or quite entire. Culmen considerably carinated between the nares, but not much produced among the soft and simple frontal plumes.

Tomiæ, erect, rather obtuse, and near to the palate. Nares, rather forward, implumose, large, the aperture broad-lunate, lateral, shaded above by a largish nude sub-arched scale. Gape, moderate and nearly

smooth. Plumage, soft, simple and discomposed. Wings and tail, short and firm. 5th alar quill usually longest; two first strongly, two next trivially, and both sub-equally, gradated up to the 5th. Tail, quadrate, firm, with very long coverts. Tarsi, sub-elevate, very strong, and nearly smooth. Anteal toes basally nect, the outer as far as the joint; lateral fores sub-equal; central not elongated; hind very large, sub-depressed, and exceeding either of the lateral fores. Nails compressed, large, strong, falcate and acute. Tongue, simple, sub-cartilaginous, with bifid tip. Type, *Cútia Nipalensis*, nobis. Nos. 254-5 of the specimens and drawings apud Zoological Society of London. In order to illustrate the affinities of our bird, I proceed to compare it with *Pastor Roseus* and with *Lamprotornis Spilopterus*.

In *Pastor Roseus*, as in all the typical *Pastors* in my possession, the bill is longer than the head, straight, conico-cylindric, and softish towards the base. Its base is angulated, and the plumes of its head carried forwards to the anteal end of the nares, are pointed, glossed and elongated. The ample and pointed wings have the 1st quill rudimentary, the 2nd long, and sub-equal to the 3rd, which is always the longest. The tarsi are considerably lengthened and heavily scaled. The toes have the laterals equal; the hind rather less, and the central fore considerably elongated. The outer fore toe has a basal connexion; the inner none. The nails, though large and by no means blunt, are neither curved nor acuminated in any special or significant degree. In *Lamprotornis Spilopterus* the wings are precisely similar to those of *Pastor Roseus*. The bill of *Lamprotornis*—which is scarcely longer than the head, uniformly sub-arched and not angulated—*so far* agrees with that of our *Cútia*. But its base is depressed, whilst forwards it has only a slight compression and sub-cylindric outline. It is, besides, sharply pointed, saliently notched, and its trenchant fine tomiæ are deeply interlocked.

Carry these peculiarities a little further and you have the bill of *Chloropsis*, the birds of which genus further agree with *Lamprotornis Spilopterus* almost entirely in the nature of their food, and the structure of their tongues and stomachs.

On the other hand, the harder, blunter, more solid and compressed bill of *Cútia*, united as it is with a simple tongue, a subtriturating stomach, and a diet consisting of hard seeds and hard insects, would affine our bird to *Pomatorhinus* and its allies, but for the scansorial feet. In *Lamprotornis Spilopterus* the nares are still round and short, though there be somewhat more approach to a nude, membranous tect than in *Pastor Roseus*. In *Lamprotornis*, the lower tarsi, rather than the structure of the feet, seem to indicate less terrestrial habits

than those of *Cútia*: for, in the former, the anteal digits are freer, and the lateral ones shorter in proportion to the central and to the hind one, than in the latter; whilst the nails have rather less than more of the *Parian* attributes. Lastly, the pointed and burnished feathers on the head of *Lamprotornis Spilopterus* are wholly wanting in our bird. In *Spilopterus* they seem to intimate relationship with the *Stares*. Nor is the intimation unrequired by those who claim such fellowship for this bird, in as much as its habits and essential structure savour more contrast than similitude with the *Sturnidæ*.

As for our *Cútia*, amidst all its anomalies (so to speak, with reference to one's own ignorance) of structure, there is certainly something *Sturnine* in its aspect; and by certain peculiarities of its feet and wings, as well as by its variegated plumage, it bears some resemblance to *Sturnella*, a genus "leading directly to the true *Starlings*."

Species new. *C. Nipalensis*, nobis; Nipalese *Cútia*, nobis. Habitat, central and northern regions; adheres to the forests, feeding on hard insects and on seeds. Gregarious and arboreal.

Color and size. Male, above, brilliant rusty yellow, with jet-black remiges and rectrices. Cap, and a large apert central portion of the wings slaty; the former confined all round, by a black band proceeding through the eyes from the nares. Below, from chin to legs, pure white; from legs inclusively to tail-coverts, flavescent: the flanks broadly cross-barred with black: a spot of the same hue at the base of the maxilla: most at the alar quills and the lateral tail feathers, tipped with white: lining of wings, and wings internally and basally, albescent: bill, above blackish, below plumbeous: legs orange yellow: iris, brown: 7 to 7½ inches long by 10½ to 11 wide: bill $\frac{14}{16}$: tarsus $1\frac{3}{16}$: central toe $\frac{11}{16}$, hind $\frac{9}{16}$. The female is a trifle less in size. Her mantle is variegated by longitudinal black drops: and her cheek band is brown instead of black, especially on the ears.

VII.—*Nest of the Bengal Vulture, (Vultur Bengalensis;) with observations on the power of scent ascribed to the Vulture tribe. By Lieutenant* J. Hutton.

On the 8th December, 1833, I found four vultures' nests in a large *barkat* tree, near the village of *Futtehgurh*, on the road from *Neemuch* to *Mhow*. These nests were of great thickness, and were constructed of small branches and twigs, mixed with dead leaves; three of them contained each one egg, of a large size, and quite white. The fourth nest was occupied by a solitary young one, just hatched, and

thinly clad, or rather sprinkled over with a short down of an ashy color. Near this tree were two others, on each of which were three or four similar nests, but as they were difficult of access, I did not ascertain their contents.

Deeming the little one too young to take from the nest, I ordered my servant, who had climbed the tree, to leave it there, intending to take it, if not flown, on my return from *Mhow*, whither I was then proceeding. On the 21st of the same month I returned to the spot, and finding the bird still in the nest, made a prize of it and bore it away to my tent. The old vultures offered not the slightest resistance, but sat stupidly watching the robbery we were committing.

On offering the young vulture raw meat, it fed greedily, and gave me reason to believe that it would be no difficult task to rear it, since it proved willing enough to feed.

I was much astonished to see the little progress it had made in growth and plumage, since I discovered it, a period of thirteen days, in which time most of the smaller birds would have been nearly ready to leave the nest; whilst my gluttonous friend had not even the smallest symptom of a feather. The whole bird was clothed with a light cinereous down, except on the neck, where it was partly bare, being in patches. The lore and round the eyes naked and livid; the eyes small and irides dark; cere and beak, black; legs and feet leaden black; claws black. It had no power to stand on its legs, owing to the great weight of the body.

After feeding, or when hungry, it emitted a fractious peevish cry, like a sleepy child.

I placed it in a basket with some straw to keep it warm, and thus took it to *Neemuch*.

When about three weeks old, the pale cinereous down with which it had at first been clothed, gave place to a down of a much darker color, the head alone retaining its first clothing. At a month old, or rather thirty-three days from the time I first discovered it, the prime and secondary quills, greater wing coverts, scapulars, tail feathers, and a few feathers on the upper part of the back near the neck, made their appearance, but their growth was extremely slow, being very little advanced four or five days after. The bird was still unable to stand, for, although his strength had increased, the weight and increase of bulk of the body still rendered his legs of no use. Once or twice on placing him on the ground, he swallowed several large stones, about the size of a sparrow's egg, and these I found voided three days afterwards in the basket which served him for a nest. In a week's time the prime

quills grew to an inch and a half long. The size of the body increased rapidly, and the bird supported itself on the knee joints, but could not yet stand at forty days old.

Its appetite became now no easy matter to satisfy, a pound of flesh at a meal being thought nothing of. At six weeks old the ruff round the neck was clearly discernible, and the quills of the wings were about three inches long. The top and hind part of the head began also to lose the soft thick down which had hitherto clothed it, and presented a naked bluish skin.

On the 20th January it stood upright for the first time, being about forty-three or forty-four days old.

At two months old, the back, shoulders, wings, lower part of the neck above, rump and tail were clothed with dark brown feathers, approaching to black; the thighs were still only clothed with down, as also the sides and belly. The ruff was thickly formed and composed of very narrow brown feathers; the breast partly clothed with narrow pendant feathers of a lighter brown and with the shaft whitish. Head closely covered with a fine soft woolly down of an ashy whiteness, which had again sprung up. Crop covered with pale brownish down. Legs greyish lead color.

It was now so tame, as to become a perfect nuisance; for no sooner did it see any person, than it ran towards them screaming and flapping its long wings, with the head bent low, and neck drawn in towards the body, often pecking at the feet of the person thus intercepted. Many were the thumps and kicks the luckless bird received from the servants, who most cordially detested him, as their bare feet were often assailed and cut with the sharp blows of his curved beak. Still, through good and evil, he remained with us, roosting at night sometimes on the top of my bungalow, and at other times wandering to some of the neighbors. Often did I wish that he would take unto himself the wings of the morn and flee away; for he never entered the house without making it so offensive as to be scarcely bearable. Yet, having brought the evil upon myself, I was bound to bear it with patience, and at length when I almost began to despair of ever getting rid of him, he deserted his usual haunts on the 10th May, being then five months old, and, I am happy to say, I saw him no more.

I once shot a pair of adult birds, male and female, which were sitting with many others of the same kind, seemingly half gorged, over the carcass of a dead cow;—the ball passed through the head of the female, into the neck of the male, and thus afforded me a good opportunity of examining them together.

The plumage of the male is dark brown above, deepest on the wings and tail; under parts of a lighter shade of brown, the shaft and middle of each feather being dashed with a dirty white, or buff colored streak;—head and neck of a dirty livid color, and destitute of feathers, but scattered over with short hairs; at the bottom of the neck a ruff of long, narrow and pointed feathers; the crop covered over with short brown feathers, and slightly overhanging the breast. Bill strong and black at the end, but paler at the base; nostrils lateral; irides dark hazel; legs thick and blackish; claws black and strong and not much hooked.

Length 2 feet 7½ inches; breadth 7 feet 5½ inches.

The female in length was 3 feet 1 inch, and in breadth 7 feet 7½ inches;—the plumage above is much lighter, being of a buff or pale fawn-colored brown; under parts of a dirty white; irides dark hazel; bill strong and dark at the end, but of a greenish livid color at the base;—the claws are longer and more hooked than in the male.

The native name is *Giddh.*

This is the Bengal Vulture (*Vultur Bengalensis*) of authors;—it is gregarious to the full extent of the word, not only flying and feeding in flocks, but also building its nests in company.

The male bird above described, rather exceeds the size given by LATHAM and Colonel SYKES.

In LOUDON'S Magazine of Natural History is a long dispute between Mr. WATERTON, the author of "Wanderings in South America," and AUDUBON, the American Ornithologist, respecting the remarkable powers of smell so long ascribed to the Vulture tribe. The latter gentleman, backed by several friends, maintains that sight alone conducts the Vulture to his prey, and he relates a number of experiments which he tried in *America* relative to this subject. Mr. WATERTON, on the other hand, ridicules these experiments, and brings forward much to invalidate them, and in favor of the old notion. It had perhaps, however, been better if these gentlemen had borne in mind the saying "medio tutissimus ibis," and allowed due weight to both these senses combined.

The view which either party takes of the subject, will be gathered best from Mr. WATERTON'S own words, which I transcribe from the 39th No. of the Magazine:—

"The American philosophers have signed a solemn certificate that they feel assured that the two species of vultures which inhabit the United States, are guided to their food altogether through their sense of sight and not that of smell:—I, (WATERTON) on the contrary, say

that all vultures can find their food through the medium of their olfactory nerves, though it be imperceptible to the eye."

This is said with reference to an article in No. 38 of the same Magazine, signed by several scientific men in *America*, stating it to be their opinion, "that they (the vultures) devour fresh as well as putrid food of any kind, and that they are guided to their food altogether through their sense of sight and not that of smell."

On this subject it appears to me that the parties, like the disputants in the fable of the Chamelion, "both are right and both are wrong," as I think may be shewn from the arguments on either side, and also from an experiment I made myself at *Neemuch*. Mr. Waterton affirms that the vultures of the United States never feed on other than putrid carcasses, while his opponents declare that they feed alike on fresh and putrid substances.

Our Indian Vultures decidedly feed as readily on a recently deceased animal, as on a putrifying one, and I have repeatedly seen flocks of the Bengal vultures at *Neemuch* squabbling over the carcass of a camel or an ox, which had not been dead more than a few hours, and which was as yet perfectly fresh.

Sight alone in these cases guided them to their prey. The young bird above described was always fed with fresh raw meat.

This does not, however, by any means prove that the vulture is deficient in the powers of smelling carrion. The effluvium from any decomposing body, being, as Mr. Waterton observes, lighter than common air, naturally rises on high, and a flock of vultures soaring above, and coming in contact with a tainted current, receive warning that a banquet awaits them on earth, causing them to search about in every direction for the desired object, in the same manner as a dog would do.

It often happens that an animal dies in some thick covert where the vultures cannot discover it, until the vapour arising from the decomposing body warns them that food is near, and excites them to a closer search. Thus, having caught the tainted current of air, the bird wheels round and round in decreasing circles as the scent grows stronger, until at length it alights on some tall tree near the spot, or perhaps on the ground, casting its piercing glances on all sides, in the hope of discovering the savoury morsel, which, if perceived, is instantly attacked "tooth and nail."

It may very possibly happen, however, that the vulture after having followed the attractive odour to the regions of earth, may yet be unable to discover the object from which it proceeds, and after having in vain endeavoured to bless his longing sight, and still more longing

appetite with the rich and tantalizing morsel, be compelled reluctantly to quit the perfumed spot.

Thus the faculties of sight and scent are both necessary to enable the vulture to discover its prey,—sometimes singly, as when it is fresh,—sometimes combined, as when it is decayed and hidden.

Thus I should pronounce the power of scent in these birds, although strongly developed, to be in aid of sight, and it may be deemed a secondary and auxiliary means of discovering food.

The following experiment I tried at *Neemuch*. A recently killed dog was encased in a coarse canvas bag, and hung up in a large *barkat* tree, so that no bird soaring above could possibly see it. On the morning after, I went to reconnoitre, and saw a number of vultures sitting on the upper branches of the tree, and on some of the neighboring ones, of which there might be about a dozen. These birds were not, however, attracted to the spot by any effluvium from the dog, as it was still quite fresh,—but they had resorted there to roost the evening before, and had not as yet aroused themselves from their lethargy.

On the fourth day I again repaired to the spot and found about twenty vultures sitting on the tree, all of them being on that side, directly over the body of the dog, which had now become very offensive ;—there were also several vultures soaring aloft in wide circles above the tree, one of them every now and then descending and alighting. Not one bird was to be seen on any of the neighboring trees,—nor on any part of the chosen tree, excepting that immediately over the carcass. That these birds were not roosting, is proved from the hour of the day being eleven ;—and besides on the morning that I saw them at roost, they were scattered over the whole top of the tree, which is an enormous *barkat* or *banyan* tree,—as well as on some of the adjoining ones, while on this forenoon they were confined to the tree, and also the one portion of the tree in which the putrid carcass of the dog was concealed.

I therefore conjecture that the smell of the decomposing body had mounted on high, and the vultures wheeling above had come in contact with the savoury vapour, soaring round in wide circles in hope of espying the object from which the scent that told of prey proceeded.

Seeing nothing below, but still smelling the putrid carcass, they had gradually narrowed their flight, until they alighted on the identical tree in which lay the hidden banquet. Thus I conclude that the powers of scent in these birds has been ascribed to them, in truth, and that it is this faculty which gives them *notice* of the prey awaiting them and induces them to search with keen and eager glances over

the earth, until the *eye* rests on the precise spot. It is therefore their acute faculty of scent, combined with their keenness of vision, which directs the vulture tribe to their prey.

Thus I think I have shewn that the three points in dispute, respecting the vultures of the United States are not applicable either to the Indian or Bengal vultures*, both of which are gregarious, both feed on fresh as well as putrid substances, and both discover their prey by the *combined* faculties of scent and sight.

VIII.—*Notes taken at the post-mortem examination of a Musk Deer. By* A. Campbell, *Esq., Nipál Residency, June* 24, 1834.

[Addressed to J. T. Pearson, Esq., Curator, Asiatic Society.]

I have the pleasure to send you, for the museum of the Asiatic Society, a very perfect skin (head and feet included) of the Thibetan Musk Deer, as well as of the *Wah* of the Bhotiahs, *Ailurus Fulgens* of the zoologists, and hope they may reach you in the same perfect state they are now in. The musk has been a full grown male, and a large one too. The natives of *Nipál* make a marked distinction between the *Trans-Himálayan* animal, and the *Cacharya* one, or that which inhabits the country along the foot of the snows on this side of the great snowy mountains; ranking the musk of the former much higher than that of the latter variety. The specimen now sent is of the *Trans-Himálayan* animal. The notes appended are of the *Cis-Himálayan* one. Through the kindness of Mr. Hodgson, I have had opportunities of examining specimens of both animals, but without observing any important difference between them. The musk pod of the Thibetan animal is covered with short close hair, while that of the *Cachar* one is clothed with very long hair, and hangs more loosely from the belly. I believe the musk of both, when unadulterated, to be much alike, and that the superficial value attached to the Thibetan animals' produce, arises from the circumstance of its being less frequently impregnated with foreign substances, for the purpose of increasing its weight and bulk, than the *Cachar* article. The pods, as they are found in the market, whether *Thibetan* or *Cacharya*, vary a good deal in appearance, and hence the general division of them above noted is subdivided: the thinner skinned ones being called *Kúghazí*, or papery, the thicker skinned ones *Ganauta*.

* Indian Vulture, *Vultur Indicus*.—Bengal Vulture, *Vultur Bengalensis*. Of the habits of the Pondicherry Vulture (*V. Ponticerianus*) I know little. They are generally seen singly or in pairs,—never I believe in flocks. (?) Do *they* in the East, hold the place and habits of the king of the Vultures of the West?

You will readily observe that the anatomical notes are very incomplete, and that they have been copied "*in the rough*" as made at the dissection; but their accuracy, and the interesting nature of the animal they appertain to, may nevertheless render them acceptable to the curious in such matters.

A musk deer (*Cacharya*) male, mature.—Length from vent to occiput 2 feet 2½ inches: occiput to snout 7 inches: tail a mere rudiment, 1½ inch long, terminating in a tuft of hair like a shaving brush. The anus surrounded by a ring of soft hairs, the skin under which is perforated by innumerable small pores secreting an abominably offensive stuff; pressure brings out the stuff liquid, like melted honey. Scrotum round, and naked; space between it and anus naked, also for a small space towards the groins. Penis 3¼ inches long, terminating in the musk bag, which is in this animal globular, a little flattened on the surface towards the ground—1½ inch in diameter either way, and thickly covered with long hairs; it is pendent from the belly, not like the *Bhotiah* musk deer examined last year, in which it was bound up to the abdominal parietes. At the centre of the musk bag is a circular hole, large enough to admit a lead pencil; its edges are naked and moist. At the posterior margin of this hole is the orifice of the penis. The penis is, in fact, terminated by the musk bag, which might be called correctly the preputial bag. The bag is composed of two distinct membranes, apparently unconnected with one another, except at the margin of the circular external hole. The external membrane is vascular and strong, the internal one is silvery, shining, and not vascular: it resembles the retina of the eye, as it is seen on dissecting the eye from without. The inner membrane which forms the cavity of the bag is lined internally with a few scattered hairs. The musk is soft, of a reddish brown color, and granular: its appearance and consistence is precisely that of moist ginger-bread. Around the margin of the hole of the bag is a circle of small glandular-looking bodies, more numerous towards the side of the penis, (the posterior margin.) The flesh of the animal is dark red, and *not of musky smell.* Bladder very large, 6 inches long, 2½ broad. The liver flat, one lobe only, with a cleft in its margin at the attachment of the central ligament. Length of liver from left to right 6½ inches, from anterior to inferior aspect 3½ inches thick: at its extreme right one inch, at its extreme left half an inch. Gall-bladder oval-shaped, pendulous from right half of liver, three inches long, 2½ in diameter. The gall duct penetrates the intestine 2½ inches from the pylorus of last or fourth stomach. Spleen thin, four inches long, 2½ broad. Kidneys unlobed, not sul-

cated on their surface, 1½ inch long, one inch broad. Stomachs four, in all respects ruminant. The large bag, or first stomach, mean length 8 inches, breadth 6 inches. Entire length of intestines 40 feet. From the pylorus to cæcum 28 feet, from cæcum to vent 12 feet. One cæcum 13 inches long, and 2 inches in diameter. The small intestines, which are round and thread-like, as well as the larger ones, are very thin coated; average diameter of large ones near the rectum 2 inches. Right lung the larger, three-lobed; left lung three-lobed also, a small centre lobe of which lies below the apex of the heart. Heart 3 inches long, 2 in diameter.

Another Musk Deer, May 28, 1835.

No branches from the arch of the aorta. The ascending aorta one inch from the arch, gives off, *first*, a common trunk, immediately divided into the left subclavian and left vertebral—*second*, 2½ inches higher: it (the aorta) divides into two branches; viz. the right cephalic, and the common trunk of the right subclavian and right vertebral.

The os hyoides is formed of a small centre body and two horns, each of the two pieces having a posteriorly directed process for insertion into the head of the thyroid cartilage. The cornua are articulated with a small process of the temporal bone below the meatus auditorius. The larynx one inch long. The trachea to the first branch given off, (which is on the right side) eight inches long: one inch further on it divides at once into four branches, the first branch goes to the highest of the four lobes of the right lung. The cartilaginous rings of the trachea incomplete behind.

Dimensions of the "Wah" of the Bhotiahs.

Ailurus Fulgens, or male, mature.

From snout to tip of tail, 37¼ inches.
From the sole of fore foot to superior crest of scapula, 9½ ins.
From foramen magnum to snout, taken with callipers, 5¼ inches.
Length of tail 6 inches.
From first cervical vertebra, to first vertebra of the tail, 16¾ inches.
Greatest circumference of head round the angle of the jaw, 10 ins.
Length of humerus, 5 inches.
Length of fore-arm, 4½ inches.
From wrist to tip of middle finger, 2¾ inches.
Length of femur, 4½ inches.
Length of tibia, and fibula, 5½ inches.
From heel to tip of middle toe, 4½ inches.
Girth round lower part of thorax, 12 inches.
From anterior edge of the orbit to tip of snout, 1½ inches.
From external opening of the ear to the tip of the nose, 3¼ ins.

IX.—*Some account of the Wars between Burmah and China, together with the journals and routes of three different Embassies sent to Pekin by the King of Ava; taken from Burmese documents.* By *Lieutenant-Colonel* H. BURNEY, *Resident in Ava.*

The chronicles of the kings of *Prome*, *Pagan*, and *Ava*, which are comprised in 38 volumes, and brought down to the year 1823, contain accounts of several disputes and wars between those sovereigns and the emperors of *China*. *Tagaung*, the original seat of empire on the *Erâwadi*, is said to have been destroyed by the Tartars and Chinese before the birth of Christ. In the reign of PHYU'-ZÔ-DI', the third king of *Pagan*, who reigned between A. D. 166 and 241, the Chinese are said to have invaded his kingdom with an immense army, over which that king obtained a great victory at a place called *Kó-thăm-bí*; but neither the date nor the cause of this war is given. The 42nd king of *Pagan*, ANÔRA-THÁ MENG:-ZÔ, who reigned between A. D. 1017 and 1059, invaded *China*,—in what year is not mentioned,—for the purpose of obtaining possession of one of GAUDAMA'S teeth; which is said, however, to have refused to quit *China*. This king had a meeting with the emperor of *China*, and the two sovereigns lived together for three months, but at what place is not mentioned. During ANÔRA-THÁ-ZÔ'S residence in *China*, the emperor daily supplied him with food dressed in various gold and silver vessels, which, on the departure of the king, he is said to have delivered to the emperor of *China's* religious teacher, with directions to dress food in them daily, and make offerings of it to GAUDAMA'S tooth. This proceeding induced many succeeding emperors of *China* to demand the presentation of the same kind of vessels from the kings of *Pagan* and *Ava*, as tokens of their tributary subjection to *China*. In the year 1281, during the reign of NARA-THI-HA-PADE', the 52nd king of *Pagan*, the emperor of *China* sent a mission to demand such gold and silver vessels as tribute; but the king having put to death the whole of the mission, a powerful Chinese army invaded the kingdom of *Pagan*, took the capital in 1284, and followed the king, who had fled to *Bassein*, as far as a place on the *Erâwadi* below *Prome* called *Taroup-mó*, or Chinese point, which is still to be seen. The Chinese army was then obliged to retire in consequence of a want of supplies; but in the year 1300, KYÔ-ZUÁ, the son of the above-mentioned king of *Pagan*, having been treacherously delivered by his queen into the hands of three noblemen, brothers, who resided at *Myen-zain*, a town lying to the southward of *Ava*, and who forced the king to become a priest and assumed the sovereignty themselves, another Chinese

army came down and invested *Myen-zain*, for the purpose of assisting and re-establishing the king Kyô-zuá. The rebel nobles applied for advice to a priest, who recommended them, apparently as a taunt, to consult tumblers and rope-dancers. Some of that profession were, however, sent for, and they, whilst exhibiting their feats before the three nobles, repeated as customary words of no meaning, a sentence like the following: "There can be no dispute when no matter for dispute remains." The nobles seized upon these words, and applying them to their own case, observed, If king Kyô-zuá is killed, the royal line, which the Chinese have come to restore, will be extinct. Accordingly, they cut off the king's head and showed it to the Chinese, who then proposed to retire, if the nobles would send some presents to their emperor. The nobles agreed, but upon condition that the Chinese army should first dig a canal; and the Chinese generals, to shew the immense numbers of their army, dug in one day, between sunrise and sunset, a canal 4900 cubits long, 14 broad and 14 deep, which canal near *Myen-zain* is still in existence*. The Burmese chronicles further state, that the little pieces of skin, which the spades and other instruments the Chinese used when digging this canal had peeled off their hands and feet, being afterwards collected, were found to measure ten baskets full, well pressed down! In the reign of king Kyô-zuá, the nine Shan towns on the frontiers of *China*, *Maing-mó*, *Hō-thá*, *La-tha*, &c. are said to have been separated from the empire of *Pagan*.

In the year 1412, during the reign of Men:-gaung, the first king of *Ava*, the Shan chief of *Thein-ní*, whose father had been defeated and killed that year when marching with a force to attack *Ava*, invited the Chinese to come and aid him against the Burmese, whilst they were besieging the city of *Thein-ní*. The king of *Ava's* son, who commanded the Burmese army, hearing of the approach of the Chinese, advanced and lay in wait for them in a wood, from which, as soon as the Chinese came up, the Burmese sallied forth and attacked them, and destroyed nearly the whole of their army. In the following year, during the same king of *Ava's* reign, and whilst almost the whole of the Burmese army were absent engaged in a war with the Talains in lower *Pegu*, another Chinese army entered the kingdom of *Ava*, and actually invested the capital, demanding the liberation of the families of two Shan chiefs, the lords or governors of *Maun-toun* and *Mó-kay*. These chiefs having committed some aggression near *Myedu*, a town in the king of *Ava's* dominions,

* It is called *Theng-dué-myaung*, and communicates with the *Zó* river, and is used for the irrigation of paddy lands.

a Burmese army had gone and attacked and defeated them. They had escaped into *China*, but their families had been captured and brought to *Ava*. The king of *Ava* refused to surrender the families of the chiefs, and the Chinese general, after besieging *Ava* for a month, found his army so much distressed from want of provisions, that he was induced to send in to the king a proposition, to have the dispute between the two nations decided by single combat between two horsemen, one to be selected on either side. The king agreed, and selected as his champion a Talain prisoner named THA-MEIN-PARAN. The combat took place outside of *Ava* in view of the Chinese army and of the inhabitants of *Ava* who lined its walls. The Talain killed the Chinese, and, decapitating him, carried the head to the king. The Chinese army then raised the siege, and retreated into *China*, without the families of the Shan chiefs.

In the year 1442, during the reign of BHUREN-NARAPADI, also called DU-PA-YŎUN-DAY-AKA, king of *Ava*, the Chinese again sent a mission to demand vessels of gold and silver, which they declared ANÔRA-T'HÁ-ZÔ, king of *Pagan*, had presented as tribute. On the king refusing, the Chinese again invaded the kingdom in the year 1443, and now demanded, that THÓ-NGAN-BUÁ, the Shan chief of *Mō-gaung*, should be surrendered to them. This person, together with an extensive kingdom belonging to him, had been conquered by the Burmese in 1442, and the Chinese, who styled him the chief of *Maing:-mó*, apparently from the circumstance of a territory of that name on the *Shue-li* river having been comprised within his dominions, are stated to have been at war with him for several years, when the Burmese conquered him. The king of *Ava* advanced with a strong force above *Ava* to oppose the Chinese, and drove them back to *Mó:-wún**. The Chinese again invaded *Ava* in the year 1445, and the king again proceeded up the *Erâwadí* to oppose them with a large force; but before the two armies met, some of the Burmese officers persuaded their king, that as the Chinese would never desist invading his dominions until THÓ-NGAN-BUÁ was surrendered to them, it would be better to comply with their wishes. The king then returned to *Ava* with his army, and on the Chinese following and investing the city, he agreed to surrender THÓ-NGAN-BUÁ, but upon condition that the Chinese army should first go and bring under subjection *Ya-mì-theng*, a town lying to the southward of *Ava*, which was then in a state of rebellion. The Chinese consented, and after taking *Ya-mì-theng* and delivering it over to a Burmese force which had accompanied them, they returned to *Ava*, when THÓ-NGAN-BUÁ

* Chinese, *Long-tchuen*.

killed himself by poison. The king, however, sent his body to the Chinese, who are said, after embowelling it and putting a spit through it and roasting it dry, to have taken it with them to *China*.

In the same king of *Ava's* reign, in the year 1449, the Chinese made an unsuccessful attempt to take possession of *Mō:-gaung* and *Mō:-nhyin*, which were at that time considered as portions of the Burmese Empire, and the king is said to have made a very handsome present in silver to the then Tsô:-BWAH of *Mō:-gaung* named THÓ-KYEIN-BUÁ, and his younger brother THÓ-POUT-BUÁ, for defeating the Chinese invading army.

In the year 1477, in the reign of MAHÁ-THI'-HA-THU'-YA, king of *Ava*, a Talain champion who had lately received the title of THAMEIN-PARAN, offered, if his master the king of *Pegu* would entrust him with 40,000 men and a favorite elephant, to march beyond *Ava* to *Khan-tí* on the frontiers of *China*, and there set up an iron post as the boundary of the Talain empire. The king of *Pegu* acquiesced, and THA-MEIN-PARAN succeeded in reaching *Khan-tí* and marking the boundary; but on his return towards *Pegu*, he was attacked near *Ya-mà-theng* by a Burmese force, defeated and taken prisoner to *Ava*. The emperor of *China*, as soon as he heard of THA-MEIN-PARAN's proceeding, sent a force to remove the boundary mark, and the Chinese general, after effecting this object, sent a mission to the king of *Ava*, to demand gold and silver cooking vessels as before. The king refused, but agreed, on a proposition again made by the Chinese, that the right of *China* to those tributary tokens should be decided by a single combat between two horsemen, one to be selected by either nation. The king accordingly selected as his champion the Talain prisoner, THA-MEIN-PARAN, who defeated the Chinese champion, and the Chinese army again retreated to *China*. A strong suspicion as to the veracity of the Burmese historian will be excited, when it is known that not only this dispute also between *China* and *Ava* was decided by single combat, but the name and description of the Burmese champion were the same on this occasion as in that before related, in the annals of the king MEN:-GAUNG the first.

In the year 1562, TSHEN-BYU'-MYÁ-YEN, (lord of many white elephants,) the great king of *Pegu*, after conquering *Ava*, *Mō:-gaung*, *Zen-may*, *Thein-ní*, &c. sent a large army to the frontiers of *China*, and took possession of the nine Shan towns (*Kó-Shan-pyì* or *Kó-pyí-daung*), *Maing-mó**, *Tsi guen*, *Hó-thá*, *Lá-thá*, *Mó-ná*, *Tsan-dá*, *Mó:-wun*,

* The Shans, who use the Burmese character, write *Maing*, but pronounce the combination *Múng*, which is their term for a town and province. The Burmese, hence, derive the words which they apply to Shan towns, *Main*, *Maing*, and *Mo*.

Kaing:-mah; and *Maing:-Lyín* or *Maing:-Lyì*, all of which, with the exception of *Kaing-mah*, are now, and apparently were at that time, under the dominion of *China*. The chief of *Mó:-meit*, then subject to *Pegu*, had complained, that the inhabitants of those nine Shan towns had committed some aggression on his territory, and the emperor of *China*, it is said, declined to assist those towns when attacked by the king of *Pegu's* army, because they had been once subject to the kings of *Pagan*. The *Pegu* army, after conquering the country, built monasteries and pagodas, and established the Buddhist religion there in its purity.

In the year 1601, NYAUNG MEN:-DARA'H, king of *Ava*, after re-building the city, and re-establishing the kingdom of *Ava*, which the Peguers had destroyed, proceeded with a large force against the Tsô:-buah of *Ba-mó**, who had taken advantage of the downfal of the extensive *Pegu* empire left by TSHEN-BYU'-MYÁ-YEN, and set himself up as an independent chief. On the approach of the king, the chief of *Ba-mó* called THÓ-TSEIN, fled to *Yunan*, and the king after taking *Ba-mó*, advanced beyond *Maing-Tein*, and sent his son, the heir apparent, close to *Yunan* with a message to the Chinese governor, threatening to attack him if he refused to surrender the fugitive chief. The governor made a reference to the emperor of *China*, who directed the chief to be surrendered, observing, that he was a subject of *Ava*, and that if the Chinese protected him their territory would be disquieted. The chief of *Ba-mó* was killed in an attempt to make his escape, but his corpse with his wife and children was sent to the prince of *Ava* by the governor of *Yunan*, and taken to the king, who appointed another Tsô:-buáh of *Ba-mó*, and returned to *Ava*. Some Burmese historians state, that the fugitive chief of *Ba-mó* took poison and killed himself; but the account above given is taken from the edition of the Royal Chronicles, revised under the orders of the present king of *Ava*.

In the year 1658, during the reign of MENG:-YE'-YANDA-MEIT, also called NGA-DAT-DAYAKA, king of *Ava*, YOUN-LHI' (DU HALDE'S YONG-LIK), who had been set up as emperor in the southern provinces of *China*, having been attacked by the Tartars from the north, came down to *Mó:-myín* (Chinese *Theng-ye-chow*), and sent a message to the Tsô:-buah of *Ba-mó*, saying that he would reside at *Ba-mó* and present 100 *viss*† of gold to the king of *Ava*. The Tsô:-buáh replied,

* The Burmese write this name *Ban-mó*, although they pronounce it *Ba-mó*. *Bán* in the Siamese and *Yún* Shan languages, and *Mán* in most of the other Shan dialects, means a village. Some of the Shans call this place *Man-mó*, and others *Kat-mái*.

† A *viss* is a Burmese weight equal to about 3½ English pounds.

that he dare not forward such a message to *Ava*, and YOUN-LHI' then offered to become a subject of the king of *Ava*. The Tsô:-buah made a reference to *Ava*, and the king ordered him to allow YOUN-LHI' and his followers to come in, upon condition that they relinquished their arms, and to forward them to *Ava*. YOUN-LHI' then came in with upwards of sixty of his nobles, including the governor of *Maing-Tshi* or *Yunan*, and 600 horsemen, and the whole were forwarded to *Ava*, and a spot of ground in the opposite town of *Tsagain* was allotted to them. The Burmese chronicles, however, create an impression, that YOUN-LHI' desired to carve out a new kingdom for himself in *Burmah*,—and state, that before coming into *Ba-mó*, he ordered a large army which was still under his orders, to march after him towards *Ava* by two different routes, one portion by *Mó:-meit*, and the other by *Thein-ní* and *Mó-né**. Shortly after YOUN-LHI' reached *Ava*, accounts were received that a large force belonging to him was attacking the Burmese territory near *Mó:-meit*, and when questioned by the Burmese, YOUN-LHI' said, that his generals were not aware of his having become a subject of the king of *Ava*, but that he would write a letter, by showing which the Chinese generals would desist. The king of *Ava*, however, preferred marching a force against the Chinese, who defeated it, as also a second force, and then came down and attacked the city of *Ava*. Some of the exterior fortifications were carried, and the Chinese penetrated to the southward, set fire to the monasteries and houses, and desolated a large tract of country in that direction. They then returned to the assault of the city, but were repulsed with much loss; and a heavy fire being kept up against them from the guns on the walls, which were served by a foreigner named MI-THARI' KATAN (Mr. COTTON ?) and a party of native Christians, a shot killed a man of rank among the Chinese, who then retreated from before *Ava*, and proceeded towards *Mó.-né* and joined the other portion of YOUN-LHI''s army, which had been ordered to march down by *Thein-ní* and *Mó-né*. The king then repaired the fortifications of *Ava*, and summoned to his assistance his two brothers, the chiefs of *Taung-ngú* and *Prome*. The Chinese army when united again advanced from *Mó-né*, and succeeded, notwithstanding many attempts made by the Burmese to stop and check

* In the account of the journey of certain Chinese from *Siam* to *China* by land, given in the 1st vol. of DU HALDE, it is stated, that when the Tartars made themselves masters of *China*, "a great number of Chinese fugitives from the province of *Yunan* dispossessed their neighbours of their land, and settled there themselves, and the inhabitants of *Kamarett* (a Shan town on the frontiers of *China*) were forced to abandon their city."

them, in again investing *Ava*, which they besieged for several months. The families and property of many of the Burmese troops being outside of the city, were seized by the Chinese and maltreated or destroyed; and this circumstance, joined to a great scarcity of provisions, created much sorrow and suffering among the besieged. The troops had neither rice nor money to purchase it, and on applying to the king, he observed that they had received their grants of paddy land for their services, and that he had no rice to give them; at the same time he stationed some of his women at the palace-gate with rice for sale. The commanders of the troops at last complained against the king to his younger brother, the prince of *Prome*, who, in the month of May 1661, entered the palace, seized the king and his family, and assumed the sovereignty with the title of "*Meng-yé-gyó-gaung.*" The dethroned king and his family were, shortly after, sent to the *Khyen-duen* river and drowned, and hence he is also styled in history *Ye-gyá-meng*, or the king thrown into the water. As soon as MENG-YE'-GYÔ-GAUNG took the reins of government, the affairs of the Burmese began to prosper. He succeeded in several successive attacks on the Chinese besieging force in different directions, and at last, as the Chinese suffered severely from these attacks and from an epidemic disease, they, one night in the month of November, 1661, evacuated their entrenchments before *Ava* and fled, leaving most of their baggage and property.

Shortly after, the king of *Ava* was advised not to allow YOUN-LHI' and all his Chinese followers to reside together at *Tsagain*, but to make the latter take the oath of allegiance and then disperse them in different parts of the country. The king ordered all the Chinese, with the exception of YOUN-LHI' and the governor of *Yunan*, to be sworn; but when the Burmese officers summoned the Chinese to attend at the pagoda where the oath was to be administered, they refused to come unless the governor of *Yunan* accompanied them. He was accordingly invited also, and on coming to the pagoda and seeing many Burmese troops in attendance, he imagined that it was their intention to put the Chinese to death. He and several of the Chinese suddenly snatched the swords out of the hands of some of the soldiers and attacked them, killing many of the Burmese; who, however, at last mounted the enclosure walls of the pagoda, and fired down upon the Chinese, until many of them were killed and the remainder submitted. But as soon as the king of *Ava* heard of this affair, he ordered the whole of the Chinese, with the exception of YOUN-LHI', to be put to death.

In the month of December, 1661, the Tartars marched down a force

of 20,000 men, under AIN-THI'-WENG, the governor of *Yunan*, which took post at *Aung-peng-lay*, and sent a mission to the king of *Ava*, demanding YOUN-LHI', and threatening, on refusal, to attack *Ava*. The king summoned a council of his officers, and observing that in the reign of king DU-PA-YÖUN-DAYAKA, THÓ-NGÁN-BUÁ had been surrendered to the Chinese, and in the reign of king NGA-DAT-DAYAKA they had been made to surrender the Tsô:-buáh of *Ba-mó* to the Burmese, gave it as his opinion, that these two precedents would justify his now delivering YOUN-LHI' to the Tartars. One of the Burmese officers expressed his entire concurrence in his Majesty's opinion; adding, that the Tartars were very powerful, and that the Burmese troops and inhabitants were suffering much from their war with the Chinese. YOUN-LHI' with his sons and grandsons were accordingly, on the 15th January, 1662, forwarded to the Tartar camp, and delivered over to the Tartar general. He, however, sent another mission to demand the person of the Chinese governor of *Yunan*, but the king of *Ava* having replied, that he had executed that governor for ingratitude and treachery, the Tartar camp broke up on the 22nd January and returned to *China*. The mutual surrender of fugitives of every description is now an established principle in the relations between the two kingdoms, and the Chinese are said to enclose carefully in a large cage and forward to *Ava*, any Burmese fugitives required by the king of *Ava*.

For a full century after YOUN-LHI' was surrendered, the Chinese and Burmese appear to have continued in peace, but at last, in the year 1765, in the reign of TSHEN-BYU'-YEN*, king of *Ava*, the second son of ALOM-PRA, another war broke out between the two nations; and as this war is the last which has occurred between them, and is often referred to by the Burmese with pride and exultation, and as its details are recorded with some minuteness, and are really calculated to give European nations a more favorable opinion of Burmese courage and military skill, I shall endeavour to make a free translation of the account of it, which is contained in the 29th and 30th volumes of the Chronicles of the kings of *Ava*.

The causes of that war are said to have been these: a Chinese named LÔLI' came to *Ba-mó* and *Kaung-toún*, with 3 or 400 oxen laden with silk and other merchandize, and applied to the *Ba-mó* authorities for permission to construct a bridge to the north of the village of *Nánbú*, in order to enable him to cross the *Tápeng* river. The *Ba-mó* officers observed, that they must submit the application to the ministers at *Ava*; and LÔLI' considering this answer as equivalent

* Lord of the white elephant, and SYMES's Shem-buan.

to a refusal, was impertinent and disrespectful. The *Ba-mó* officers suspecting from LÔLI's manner, language, and appearance, that he was not a common merchant, but some Chinese officer of rank, seized and sent him to *Ava* with a report of his conduct. He was confined at *Ava* in the usual manner; but after a full inquiry and examination, nothing of political importance transpiring, he was sent back to *Ba-mó*, with orders that he should be allowed to trade as usual, and that if he really wished to construct a bridge, which however appeared to the ministers to be only an idle boast on his part, he should be permitted to do so wherever he pleased. On his return to *Ba-mó*, he declared that some of his goods which had been detained there when he was sent to *Ava*, were missing or destroyed, and insisted upon compensation. The *Ba-mó* officers replied, that when he proceeded to *Ava* he took only five or six of his men, leaving all the rest in charge of his goods, and that if there really was any deficiency, he must look for it among his own people, and not among the Burmese. LÔLI' left *Ba-mó* much dissatisfied, and on his arrival at *Mó-mi*, he complained to the Chinese governor there, that Chinese traders were ill treated by the *Ba-mó* officers, who had also sought pretences for accusing him and destroying his merchandise.—He then went to *Maing-Tshì*, and preferred the same complaint to the Tsŏuntú, or governor general, there. The Tsŏuntú observed, that he would wait a little and see if any thing else occurred, to prove the truth of LÔLI's statement, that Chinese were ill used in the Burmese dominions, and not permitted to trade according to established custom. About the same time, an affray took place between some Burmese and a Chinese caravan of upwards of 2000 ponies with one LÔTA'RI' as their chief, which had come to *Kyaing-toŋn* and put up to the north of that town at the great bazar of *Kat-thwah*. The Burmese had bought some goods on credit, and refused payment when demanded by the Chinese. In this affray a Chinese was killed, and the Tsŏbuáh being absent at *Ava* at the time, LÔTA'RI' applied to the subordinate Burmese officers for justice, according to Chinese custom. These officers decided, that the man who had committed the murder should, agreeably to Burmese custom, pay the price of a life,—namely, 300 ticals. LÔTÁRI' refused money, and insisted upon the man being delivered over to the Chinese; but the Burmese officers replied that such was not their law, and then proposed that the man who had committed the murder should be put to death. LÔTA'RI' declared that this would not satisfy them, and returned to *China* with some of the principal traders, and complained to the Tsŏuntú of *Yunan**. That officer being urged, at the same time,

* Within the last six years two cases of accidental homicide occurred at *Ava*,

by the ex-Tsô:buáh's of *Ba-mó*, *Theinní*, *Kyaíng-toŭn* and other subjects of *Ava*, who had taken refuge in *China*, to invade the Burmese dominions, made such a report of the abovementioned circumstances to the emperor of *China*, as to induce his majesty to order an army to march and take possession of *Kyaíng-toŭn*. The Tsŏuntú put up a writing on the bank of the *Tálô* river containing these words: "Deliver a man to us in the room of our man who was killed, or we will attack you;" and shortly after, a Chinese army under a general named YI'N-TA'-LÔ YE', consisting of 50,000 foot and 10,000 horse, advanced and invested *Kyaíng-toŭn*. The Tsô:buáh of *Kyaíng-toŭn* at the same time revolted and joined the Chinese.

On TSHEN-BYU'-YEN, the king of *Ava*, hearing of this invasion, he dispatched, on the 28th of December, 1765, eleven divisions of troops, consisting of 20,000 foot, 200 war elephants, and 2,000 horse, under general LET-WE'-WENG-DÔ-MHU' NE-MYÓ-TSI-THU'*, to relieve *Kyaíng-toŭn*. The Burmese general, on approaching that place, contrived to send in some men in disguise, and arrange a combined attack on the Chinese besieging force. Their cavalry, which was numerous, was charged by the Burmese with elephants, and the Chinese being defeated, retired to the bank of the *Talô* river, where they took post behind some mud-works which they threw up. The Burmese general again attacked them and drove them to the bank of the *Mé-khaung* or great *Cambodia* river, where the Chinese army again took post; but they were attacked here also, their general YI'N-TÁ-LÔ-YE' killed, and their army driven back to *China* with much loss, and in great disorder. The Burmese army then returned to *Ava*, where they arrived on the 8th April, 1766. THI'N-WI'-BUÁH and DÔ-BAYÁ, the Tsô:buáhs of *Kyaíng-toún* and *Lú-ta-tshay-nhít-paná* sent excuses, stating that they had been forced to join the Chinese; but the king of *Ava* disbelieved them.

In January, 1767, intelligence was received by the king of *Ava* that another Chinese army, consisting of 250,000 foot and 25,000 horse, had entered the Burmese dominions, and that on their arrival on or near *Shwi-mue-loŭn* mountain, to the westward of the *Mé-khaung*

of a Burmese killing a Chinaman; and on both occasions, the Chinese residents successfully used their influence with the Burmese prince, MEN-THA-GYI'H, to have the Burmese executed. Nothing would satisfy the Chinese but the death of the individuals who had slain their countrymen.

* The *Let-wé-weng-dó-mhú* is the officer in command of the northern entrance to the palace. The words mean literally, "left-hand royal entrance chief," and the *dó*, or royal, is often omitted. This is SYMES's *Ledougmee*, and "the governor of the north gate" of some of our officers.

river, a part of the army, consisting of 150,000 foot and 15,000 horse, under general YI'N-TSU'-TÁ-YENG, was detached by the route of *Nuay-leít* near *Mó-wún* against *Bamó*. His Majesty had before, anticipating the return of the Chinese, ordered *Kaung-toŭn* to be reinforced and filled with provisions, so as to enable it to hold out under its governor BALA-MEN-DEN, and now directed that two armies should proceed from *Ava*, one by water up the *Eráwadi* to *Ba-mó* under the LET-WE'-WENG-MHU', and the other by the land route to the westward of that river, under the Wún-gyíh MAHÁ-TSI'-THU', who should be joined by all the force he might find at *Mŏ-gaung*, *Mó-nhyen* and other towns in that neighbourhood, and then march by the *Tsandá* (*Sánta**) route, and attack the Chinese. On the 30th January, 1768, the Wún-gyíh marched with 22 divisions, consisting of 20,000 foot, 2,000 horse, and 200 war elephants; and on the 4th February, the water force, under the LET-WE'-WENG-DÔ-MHU', consisting of 11 divisions, 15,000 men, and with 300 boats carrying guns and jinjals, proceeded up the *Eráwadi* towards *Ba-mó*.

From *Shyá-mue-loŭn* mountain another portion of the Chinese army, consisting of 10,000 horse and 100,000 foot, under general TSHENG-TÁ-LÔ-YE' marched by the *Tsandá* route against *Mŏ-gaung*. A body of 5,000 horse and 50,000 foot also took post on *Thínzá-nuay-lein* mountain, whilst the force under general YI'N-TSU'-TÁ-YENG, when it reached *Ba-mó*, stockaded itself along the bank of the river at the spot where the mart is held.

The governor of *Kaung-toŭn*, not having sufficient force to go out and attack the Chinese, employed himself in repairing the old and constructing new defences, &c. about that town. The Chinese, leaving 3,000 horse and 30,000 foot with three generals to defend their stockade at *Ba-mó*, advanced with 70,000 foot and 7,000 horse under general TSU'-TÁ-YENG himself, and invested *Kaung-toŭn*, which they assaulted with scaling ladders, axes, choppers, hooks and ropes; but the garrison, as previously arranged, met the assailants, not only with a heavy fire of cannon and musketry, but with large boilers of hot dammer and molten lead, and long pieces of heavy timber, which they let fall upon them. The Chinese were driven back with great loss, declaring that the besieged were not men, but *nats*† or inferior celestial beings. The Chinese then stockaded themselves around *Kaung-toŭn* at a distance of more than 140 cubits.

The LET-WE'-WENG-MHU', or Burmese general, commanding the

* The Burmese pronounce *Tsanta* as *Tsandă*.

† The Burmese *nat* is the same as the Hindu *Devah*, and most of the Burmese *nats* are taken from the Hindu Mythology.

water force from *Ava*, on arriving at the mouth of the *Nat-myet-nhá* above the town of *Shuegú*, stopped to allow all his boats to come up, and determined, in the meantime, to throw into *Kaung-toŭn* a supply of ammunition. He selected three officers who volunteered to perform this service with three fast-pulling boats. The Chinese had only three boats, which they had constructed on their arrival at *Ba-mó*. The Burmese volunteers succeeded at daybreak one morning to pass through the Chinese besieging force stationed to the westward of *Kaung-toŭn*, and entered that town with the supply of ammunition, as well as with presents of dresses and money, which the king of *Ava* had sent to the governor. On the same night the Chinese force made another unsuccessful attack. The governor arranged with the Burmese volunteers a plan of operations,—namely, that the water force from *Ava* should first go and attack the Chinese posted at *Ba-mó*, and then fall on the rear of the force besieging *Kaung-toŭn*, from which the governor should at the same time make a sortie. The volunteers again at day-break passed through the Chinese force stationed to the north-west of the town, and rejoined the water force. The general of that force, entirely approving of the governor of *Kaung-toŭn's* plan of operations, now moved his fleet of boats close along the western bank of the *Erawadi* to *Ba-mó*, and then, landing his soldiers under a heavy fire from his boats, he stormed and carried all the Chinese stockades. The Chinese general before *Kaung-toŭn*, TSU'-TÁ-YENG, dispatched upwards of 1,000 horse in support of *Ba-mó*, but the Burmese general placed 2,000 troops to prevent the Chinese crossing the *Len-ban-gya* river, and TSU'-TÁ-YENG recalled them.

The Burmese general then selected three bold and trusty men to pass through the Chinese force before *Kaung-toŭn* at night, and report to the governor the fall of *Ba-mó*, and the intention of the Burmese general to attack on a certain day the besieging force. On the appointed day, the Burmese general, leaving one division of his force at *Ba-mó*, marched with the remaining nine divisions, and attacked the Chinese before *Kaung-toŭn*, and at the same time the garrison of *Kaung-toŭn* sallied out. The Chinese, although greatly superior in numbers, were much disheartened at the loss of their stockades at *Ba-mó*, and after three days' fighting, the whole of the Chinese works before *Kaung-toŭn* also were taken. Ten of their generals and more than 10,000 men were killed, and the Chinese, after setting fire to the boats which they had been building, closed round their general TSU'-TÁ-YENG, and, taking him up, fled to their force on *Thin-zá-nuay-lein* mountain. The Burmese followed the

Chinese, and, driving them out of their stockades on that mountain, pursued them as far as *Mó:wún*, taking a great quantity of arms, prisoners and horses.

The land force of 22 divisions, which marched from *Ava* under the Wún gyíh MAHÁ-TSI'-THU', having arrived at *Mō-gaung*, after repairing the defences of that town, and leaving a sufficient garrison in it, proceeded to meet the Chinese army, which was advancing by the *Santa** route. On crossing the *Kat-kyo-waing-mó*, the Wún-gyíh heard that the Chinese army were near *Lízó* mountain, and sent a small party in advance to reconnoitre. This party before it came to *Lízó* fell in with a party of 1,000 horse, which the Chinese general TSHENG-TÁ-LÔ-YE had also sent in advance, for the same purpose of reconnoitring, and the Burmese, drawing the Chinese into a narrow pass between two mountains, where their horse could not form line, attacked and defeated them. Judging, however, from this reconnoitring party only consisting of 1,000 horse, that the Chinese army must be of great force, the Burmese party stopped on the bank of the *Nán-nyen*† river, and sent some scouts on in advance. These returned with the intelligence, that, on ascending the top of a mountain and climbing some trees, they had seen the Chinese army, which amounted to about 20,000 horse, and 100,000 foot. The Wún-gyíh then appointed six divisions of his army to proceed with celerity by the right, and six by the left, round each side of the *Lízó* mountain, whilst with the remaining ten divisions, he advanced by the centre route slowly, and occasionally firing cannon. The Chinese general hearing of the approach of the Burmese, left one-third of his army to take care of his stockades in *Lízó*, and with the remainder advanced to meet the Burmese, and took post on the eastern bank of the *Nan-nyen* river. The Burmese force under the Wún-gyíh came up and joined the reconnoitring party on the western bank of the same river, whilst the right and left wings, which had reached *Lízó* by marching round the rear of the Chinese main army, suddenly attacked and carried the stockades there. The Chinese in those stockades believing that the principal portion of their own force was in front of them, were completely taken by surprise, and fled and joined their army under general TSHENG-TÁ-LÔ-YE'. These wings of the Burmese army then fell in with another Chinese force, which was coming from *China* with a convoy of provisions to their army, and took possession

* The distance between *Mō-gaung* and *Santa* is said to be only five or six days' journey.

† For the Shan word *Núm*, water and small river, the Burmese always write *Nán*.

of the whole of the horses, mules and provisions. The Burmese generals reported their successes to their commander in chief, the Wún gyíh, by a swift horseman, and proposed that their force should now fall on the rear of the Chinese army stationed on the east bank of the *Nán-nyen*, whilst the Wún-gyíh attacked it in front. The Wún-gyíh sent the messenger back approving of the plan of attack, and fixing the day on which it should take place. On the appointed day, the two wings of the Burmese army fell on the rear of the Chinese on two different points, whilst the Wún-gyíh crossed the *Nán-nyen* and attacked them in front with the main army. The Chinese generals seeing their army placed between two fires, retreated and took post at a spot beyond the *Lízó* mountain; but the Wún-gyíh here again attacked them, and completely routed their army, 100,000 men of which fled to *Santá* and there threw up new works. The Wún-gyíh halted his army at *Maing:lá*, in order to recruit it.

The Wún-gyíh having been taken unwell, the king of *Ava* recalled him, and appointed the LET-WE'-WENG-DÔ-MHU', who was in command of the *Ba-mó* water force, to go and relieve the Wún-gyíh, and with orders to attack and destroy the Chinese army, and then take possession of the eight Shan towns, *Hóthá*, *Láthá*, *Mónâ*, *Tsandá*, *Maing:mó*, *Tsi-guen*, *Kaing-máh*, and *Mó:wún*. The LET-WE'-WENG-DÔ-MHU' proceeded with his ten divisions from *Ba-mó* and joined the Wún-gyíh's army at *Maing:lá*, and soon after advanced and attacked the Chinese force at *Santá* under general TSHENG-TÁ-LÔ-YE', which had been suffering much from want of provisions, the inhabitants of the eight Shan towns having refused to comply with the Chinese general's requisitions, declaring that they were subjects of the king of *Ava*, and afraid to assist the Chinese. The Chinese were forced to retreat, and the Burmese pursued them as far as *Yunan*, taking a multitude of prisoners, horses, arms, &c. The LET-WE'-WENG-MHU' after taking possession of the eight Shan towns, which had heretofore thrown off their allegiance to *Ava*, joined another Burmese general, the Wún-gyíh MAHÁ THI'-HA-THU'RA, who had been sent with an army by the route of *Lú-ta-tshay-nhít-panâ*. The two generals attacked another Chinese force of upwards of 50,000 men, which was posted on a high mountain to the north-east of *Theinní*, and one-third only of these Chinese escaped into their own country. The LET-WE'-WENG-DÔ-MHU' and the Wún-gyíh MAHÁ THI'-HA-THU'RA having completed his Majesty's service, then returned, with the prisoners, guns, &c. which they had taken, to *Ava*, where they arrived on the 21st May, 1767.

In the month of November, 1767, another Chinese army, consist-

ing of 60,000 horse and 600,000 foot, under the emperor of *China's* son-in-law, MYENG-KHOU'N-YE', and his brother TSU'-TÁ LÔ-YE', entered the Burmese dominions by the *Theinní* route, accompanied by the ex-Tsô:buáh of that place, NGA-AUNG-DUON; 100,000 men were sent at the same time against *Ba-mó* by the *Thínzá-nuay-lein* route. On this Chinese army attacking *Theinní*, the governor and other officers evacuated the place with most of the inhabitants. The Chinese general, MYENG-KHOU'N-YE' then advanced with 30,000 horse and 300,000 foot by the *Thíbó* road, whilst the other general, TSU'-TA-LÔ-YE', having placed a garrison with the ex-Tsô:buáh in *Theinni*, constructed to the south-west of that town, some extensive stockades, in which he took post with 20,000 horse and 200,000 foot, and made arrangements for forwarding supplies of provisions to that portion of their army which was in advance. When a report of this intelligence was received at *Ava* from the Tsô:buáh of *Thíbó*, the king appointed 30 divisions, consisting of 30 war elephants, 3,000 horse and 30,000 foot, under the command of the Wún-gyíh MAHÁ TSI'-THU', to go and meet the Chinese army advancing by *Theinní* and *Thíbó*. This army marched from *Ava* on the 24th December, 1767. Two days after, another army of 20 divisions, 200 war elephants, 2,000 horse, and 20,000 men, under the Wún-gyíh MAHÁ THI'HA-THU'RA, marched by *Shue-zá-yan**, up *Nyaung-ben-gyíh* and *Pó-gyó*, towards the rear of the advancing Chinese army, in order, after intercepting their communications with *Theinní* and cutting off their supplies, to attack the Chinese in the rear. Four days after a third army, consisting of 200 war elephants, 2,000 horse and 1,000 men, was detached under the command of the LET-WE'-WENG-DÔ-MHU', with orders to advance by the *Mómeit* road, and attack the rear of a Chinese force which was advancing by that road†.

On the Wún-gyíh MAHÁ TSI'-THU' arriving at *Ban-gyí*‡ beyond *Thíbó*‡, he sent forward seven divisions of his army which fell in with the Chinese and were driven back. The Wún-gyíh then advanced with his whole army, and made an attack on the outposts of the Chinese force, which were posted on *Gout*§ mountain to the westward of *Thí.ô*, for the purpose of drawing the enemy out; but the Chinese

* A pagoda at *Paleit* a village on the *Myet-ngay*, six or seven miles to the S. E. of *Ava*.

† This is the campaign of which SYMES has given some account in p. 69. &c. of the introduction to his embassy.

‡ SYMES's *Peengee* and *Chibo*.

§ SYMES's *Goup-toung-taung* is a hill or mountain in Burmese, and *Gout* mountain is near *Thíbó*, and not *Bamó*.

general assailing the Wún-gyíh with an immense superiority of force, the Burmese were defeated with loss, and driven back in great disorder. Three regiments were taken prisoners, being unable to extricate themselves from the midst of the Chinese army, which they had penetrated in a charge. The Wún-gyíh collected his troops and retired, thinking only of defending himself. The Chinese general pursued the Burmese with increased confidence, until the advance of his army reached *Bout-thek-kay-byen*. The Wún-gyíh sent notice to *Ava*, that every attempt which the Burmese had made to stop the Chinese had failed; that they had penetrated as far as *Bout thek-kay-byen*; and that he had taken post at *Loŭngá-byen-gyíh*. When this intelligence reached *Ava* on the 9th March, 1768, the whole of the ministers and officers were much alarmed, and advised his Majesty to fortify the city, and make preparations for receiving the Chinese, who were but two or three days' journey distant. The king abused his officers, and declared that if the Chinese came, he and the four princes, his brothers, alone would meet and destroy them.

The Wún-gyíh MAHÁ THI'-HA-THU'RA, who was ordered to proceed with his force to the rear of the Chinese army and cut off their supplies, sent a strong detachment in advance under the Tsit kê-gyíh*, TEIN-GYA':MEN:GAUNG, to reconnoitre. This officer reported, that the Chinese were advancing in great force, and that he would stockade himself and oppose them. The Wún-gyíh fearing to divide his force, ordered the Tsit-kê-gyíh to fall back, but the latter, being of opinion that his retreating from the immediate vicinity of the enemy would encourage them, and make them believe that the Burmese force was inconsiderable, urged the Wún-gyíh to advance, and threw up a stockade with large bamboos. The Chinese came up at night and repeatedly attacked this stockade, but without success. As soon as the Wún-gyíh learnt the Tsit-kê-gyíh's determination to make a stand, he pushed on with the rest of his force, which accelerated its pace on hearing the sound of cannon and musketry, and the moment it reached the Tsit-kê-gyíh's stockade, attacked the Chinese with great impetuosity. The Chinese were defeated and forced to retire, and after the Burmese army had recruited a little, the Wún-gyíh followed the enemy, and attacked and drove them out of *Lá-shi* or *Lá-shyó*, where they had stockaded themselves; and again out of *Kyú Shyó*, until they took shelter in *Theinní*. The Wún-gyíh followed and took post on the bank of the *Nan-beng* or *Nún-peng* river to the south-east of *Theinní*, sending three divisions of his army under TEIN-GYA':MEN:GAUNG to the west of the *Salueen* river at the *Kuon-*

* Lieutenant-General in war.

loŭn-dá:gú ford, with orders to stop and cut off a convoy of provisions which was coming to the Chinese. This service was successfully performed, and the Chinese general Tsu'-ta'-lô-ye' and other officers finding their own supplies intercepted, were unable to spare any for their army which was in advance under Myeng-koun-ye'. The Chinese near *Theinní* were soon in great distress from a scarcity of provisions, and too uneasy to come out and attack the Burmese. Hearing a report also, that Teingya':men:gaung was coming to attack them with 1,000 *musth* elephants, the whole Chinese camp were watching the clouds*. At this time, the Let-wé-weng mhú, who had marched by the *Mó:meit* road, arrived with his ten divisions, and joined the Wún-gyíh Maha' Thi'ha-thu'ra before *Theinní*. The Let-wé-weng-mhú proposed to the Wún-gyíh to let him march on at once with 30 divisions, and fall on the rear of the Chinese advanced force near *Thíbó*; but the Wún-gyíh was of opinion, that the Chinese near *Theinní* should first be disposed of, and believing that the town of *Theinní*, in which Shans and Chinese were intermingled, could be more easily carried than the Chinese works outside under their general Tsu'-ta'-lô-ye', the Wún-gyíh stormed *Theinní* with three divisions of 10,000 men each, and captured it with the whole of the Chinese magazines. The ex-Tsô:buáh, several Chinese officers of rank, and as many of the garrison as could escape, fled into the Chinese entrenchments beyond the town, but nearly 2 or 3,000 Shans and Chinese were killed.

The Wún-gyíh Maha' Thi'ha-thu'ra then made arrangements for depriving the Chinese camp of their supply of water, and posted divisions of his army in a line along the *Nán-beng* river, from the south of *Theinní* from *Kyaŭk Koŭn* on that river to the east of the town, covering at the same time the *Nán-tú* river, and planting troops at every road or passage leading down to the points at which the Chinese used to come and take water. The Chinese army soon began to experience great distress, no provisions being able to reach them from the rear, as well as being in want of water: and when the Wún-gyíh ascertained this fact through some prisoners who had come over to the Burmese in search of water, he attacked the Chinese entrenchments at three points with more than 30 divisions and captured them. The emperor of *China's* brother, Tsu'-tá-lô-ye', finding the army unmanageable, cut his throat with his own sword and died. The Chinese fled pursued by the Burmese, who took a great many prisoners, together with arms, elephants and horses, and

* *Tein* in the Burmese language means cloud, and *akyá*, or in composition *gyá*, means between. This is Symes's *Tengia Boo.*

killed more than they could number. The Chinese generals YAU'K-AN, KHE'-WA, PAN-THE, YI'N-TSOUN-YE', YI'N-TÁ-YI', and KUEN-LÔ-YE' were also taken prisoners with their chargers.

The Wún-gyíh MAHÁ THI'HA-THU'RA then, leaving a strong garrison in *Theinní*, advanced against the Chinese army under MYENG-KOUN-YE'. The other Wún-gyíh, MAHÁ TSI'-THU', who had posted himself on *Loŭngá-byen-gyíh*, learning by the return of the messenger whom he had sent to *Ava*, that his majesty was highly displeased with him, determined to make another attack on the Chinese, and, marching round the rear of *Thoŭn:zay*, attacked them with three divisions on both flanks and centre, but owing to the great force of the enemy, the Burmese were repulsed, and succeeded only in killing 10 or 20,000 men. The Wún-gyíh rallied his troops, and after recruiting them a little, arranged another attack. He sent 4,000 men secretly at night to the rear of the Chinese army round their right and left flanks, with orders to be concealed during the night, and at day-break to fall upon the right and left wings of the enemy; whilst the Wún-gyíh, on hearing the sound of their attack, would advance with the rest of the army in three divisions, and attack the Chinese in front. This attack succeeded completely; and the weapons of the Burmese were so smeared with the blood of the Chinese, that they could not hold them. The Chinese had before suffered greatly from want of provisions, and their general, now believing that the Burmese from *Theinní* had arrived in his rear, deemed it prudent to fall back with the whole of his 30 divisions of 10,000 men each. The Wún-gyíh continued to attack the retreating enemy, and the whole of the woods and hills were covered with the dead bodies of the Chinese. The Chinese general MYENG-KOUN-YE', collecting as many of his men as he could, retired by *Taung-bain*, avoiding the road to *Theinní*, and on arriving at *Maing:yoŭn* and *Maing:yín*, took post on the top of a hill. The Wún-gyíh MAHÁ TSI'-THU' in the pursuit of the Chinese met the other Wún-gyíh MAHÁ THI'HA-THU'RA advancing with his force, at *Naung-bó* to the westward of *Lá-shyó*. The two armies united and marched towards the Chinese general at *Maing:yoŭn* and *Maing:yín*, but as soon as he heard of their approach, he fled into *China*. The two Wún-gyíh's finding the Chinese had retired, and that the king's service was completed, returned with all their prisoners, arms, &c. to *Ava*, where they arrived on the 17th March, 1768.

The Chinese force of upwards of 100,000 men which had marched against *Ba-mó* by the *Thínzá-nuay-lein* road, repeatedly attacked that place, which was so skilfully defended by BULA MEN:DEN, that they

could not carry it, and after losing a great many men, and suffering much from scarcity of provisions, they heard of the flight of the large Chinese army under the king's brother and son-in-law, and immediately raised the siege of *Ba-mó*, and fled to *China*.

For more than twelve months there was a cessation of hostilities between the two countries, owing apparently to a communication sent from *Ava* to *China* by eight Chinese prisoners, who were released for that purpose. But about the end of 1769, intelligence was received from *Ba-mó*, that another Chinese army of 50,000 horse and 500,000 foot was marching against the Burmese dominions under three generals, THU'-KOUN-YE', AKOUN-YE', and YUON-KOUN-YE'. On the 21st October, the king of *Ava* sent a force of 100 war elephants, 1,200 cavalry and 12,000 foot under the Amyauk-wún*, NE MYO':-THI'HA-THU', to *Mó:gaung*, by the route to the westward of the *Eráwadí*. Three days after, another force amounting to 52,000 men under the Wún-gyíh MAHÁ THI'HA-THU'RA proceeded by water to *Ba-mó*; and in another three days, two more divisions proceeded with the cavalry and elephants under the Mó:meit Tsô:buáh and Kyô-den:yázá, by the road to the eastward of the *Eráwadí*.

The three Chinese generals, on reaching *Yóyí* mountain to the north of the *Lízó*, detached 10,000 horse and 100,000 foot under the Kyen-ngan officer, TSHENG-TA'-YI'N, to advance by the *Mō:-gaung* road, and cutting timber and planks in the most convenient spots, brought them to the bank of the *Eráwadí*, and left the general Lô-TÁ-YE' with 10,000 carpenters and sawyers, to construct large boats†. The main army then marched on towards *Ba-mó*, and after throwing up very extensive stockades at *Shue-nyaung-beng*, twelve miles to the east of *Kaung-toŭn*, and leaving 100,000 foot and 10,000 horse to defend them under YUON-KOUN-YE', the rest of the army, amounting to 30,000 horse and 300,000 foot, under the other two principal generals and ten officers of high rank, advanced and invested *Kaung-toŭn* towards the land side. 500 boats also, as soon as they were built in the upper part of the *Eráwadí*, were brought down and placed with 50,000 men under YI-TÁ-YI'N, the governor of *Thú-kyeng*, so as to invest *Kaung-toŭn* on the river face. *Kaung-toŭn* was repeatedly attacked by the Chinese by land and water, but its governor, BULA MEN:DEN, defended it so bravely and skilfully, that the Chinese were obliged at last to confine their operations to

* Chief of artillery; SYMES's *Amion-mee*.

† This statement is opposed to Mr. GUTZLAFF's opinion, derived from the Chinese accounts of this war, that some navigable river from *China* falls into the *Eráwadí*, and that the Chinese army brought boats with them by that means.

keeping up an incessant fire against the place, from the positions occupied by their land and water force.

As soon as the Wún-gyíh MAHÁ THI'HA-THU'RA, who was advancing with the water force from *Ava*, heard that the Chinese were closely besieging *Kaung-toŭn*, he ordered TSA'N-LHA-GYI'H, DHAMMATÁ, BINIÁ UH and SHUE-DAUNG-NGAY with four war-boats and all the boats which had joined him from the different towns on his route from *Ava*, to proceed with expedition before the rest of the army, and endeavour to throw into *Kaung-toŭn* a supply of ammunition and provisions. These four officers attacked the Chinese boats in front of *Kaung-toŭn*, and after defeating and driving them off, and capturing many, succeeded in relieving *Kaung-toŭn*. TSA'N-LHA-GYI'H then stockaded himself with 5,000 men in the rear of the Chinese besieging force, on a spot to the south of *Kaung-toŭn*, and north of the mouth of the *Tsín-gan* or *Tsín-khan* river, whilst DHAMMATÁ and BINIÁ UH with their boats, and the Chinese boats which they had captured, took post near the island of *Kyun-dó* on the side of the *Eráwadí*, opposite to that on which *Kaung-toŭn* stands. The Chinese water force returned to its former position in front of *Kaung-toŭn*, and 40 or 50,000 Chinese made an attack on TSA'N-LHA-GYI'H'S stockade, but being unable to carry it took post round it.

The Wún-gyíh being joined at *Tagaung* and *Malí* by the elephants and cavalry which had marched from *Ava* by the eastern route, detached 100 war elephants, 1,000 horse and 10,000 men under the Let-wé-weng-mhú with orders to proceed to *Mó:meit*, and after putting that place in a state of defence, to watch the state of affairs and seize any opportunity which might offer for attacking the Chinese army. The Wún-gyíh himself then advanced with his boats, and on arriving near *Kaung-toŭn*, took post near the island opposite that place, towards the western bank of the *Eráwadí*. He then ordered 1,500 horse and 15,000 foot, under the Shye-weng-mhú* and Tein-gyá:men:gaung, to cross over and land on the eastern side of the *Eráwadí*, and, marching round the rear of *Moyú* on the north bank of the *Len-ban-gya*, to attack any convoy of supplies and provisions which might be coming to the enemy from *China*, and afterwards fall on the rear of the Chinese army.

The force which marched from *Ava* to *Mō:gaung* under the Amyauk-wún, after placing *Mō:gaung* in a state of defence, advanced to meet the Chinese army coming in that direction. Learning from his scouts

* "Commanding the eastern entrance into the palace," to which honorable post this officer, who had so much distinguished himself in the preceding campaigns, appears to have been elevated.

that the Chinese force of 10,000 horse and 100,000 foot under general TSHENG-TÁ-LÔ-YE', which had been detached towards *Mô:gaung*, had halted on the east bank of the *Eráwadí*, near *Naung-tá-lô* island, above *Kat-kyo-wain-mó*, in order to construct a bridge over the river, which is narrow there, the Amyauk-wún rapidly advanced with his whole force and took post near *Peng-thán*, an island lying near the west bank, and above and below it along the river, whence he prevented the Chinese from building their bridge or crossing the *Eráwadí*.

The Shye-weng-dô-mhú, having crossed the *Eráwadí* river with his 15,000 men, and landed at the landing-place of the *Ba-mó* mart, marched round the north of the *Len-ban-gya* stream and cut off the supplies of the Chinese, capturing every convoy of men, horses and mules which was approaching by the *Maing:tein* road, and then turned round to attack the rear of the Chinese army; whilst the Let-wé-weng-mhú, who had been detached to *Mó:meit*, having put that town in a state of defence and placed in it a strong garrison with its Tsô:buáh, was advancing towards *Kaung-toŭn* with his ten divisions. The Chinese generals, THU'-KOUN-YE' and AKOUN-YE', hearing that the Shye-weng-mhú and Let-wé-weng-mhú were advancing in two directions from the rear to attack them, sent out a force of 5,000 horse and 50,000 foot under YÓ-TÁ-YI'N, the governor of *Lhyín-yín*, to meet the Let-wé-weng-mhú, and another force of the same strength under KÓ-TÁ-YI'N, to meet the Shye-weng-mhú.

As the Let-wé-weng-mhú was advancing from *Mó:meit* and had crossed to the northward of the *Tsín-khan* river, he fell in with 5,000 Chinese horse which were preceding the Chinese general YÓ-TÁ-YI'N, and immediately attacked them with 100 elephants and 2,000 musqueteers and broke them. He then sent against the right and left flanks of the Chinese force 500 Cassay and 500 Burmese horse, whilst he himself penetrated into the very centre of the Chinese force with the rest of his ten divisions. The Chinese were completely defeated and driven back with great loss, and the Let-wé-weng-mhú halted his force, and took post on the north bank of the *Tsín-khan* river.

The Shye-weng-mhú also fell in with the Chinese force sent against him at a spot beyond the *Nán-ma-bué* river, to the eastward of the great Chinese stockade at *Shue-nyaung-beng*, and, dividing his force into three portions of five divisions each, received the Chinese attack. The Chinese horse advanced with great impetuosity, but being received by the fire of 3,000 musqueteers from the Burmese right and left wings, they were driven back with the loss of 5 or

600 men. The whole Burmese force then advanced and attacked the Chinese, and forced them to fall back to their great stockade at *Shue-nyaung-beng* with a heavy loss. This stockade being as large and extensive as a city, the Shye-weng-mhú halted and took post on the east side of the *Nán-ma-bué* river.

On the Let-wé-weng-mhú then sending out a party of 100 horse to open a communication with the Shye-weng-mhú, the latter reported that all the supplies of the enemy had been intercepted, and their communication with the rear cut off, and proposed that the two Burmese forces should make a combined attack on the great Chinese stockades at *Shue-nyaung-beng*, as, after capturing them, the Chinese army before *Kaung-toŭn* would be enclosed like fish in a net. The Let-wé-weng-mhú on receiving this proposition, summoned all his officers, and after praising it to them, advanced with the whole of his ten divisions and joined the Shye-weng-mhú's force before the great Chinese stockades at *Shue-nyaung-beng*. A plan of attack being then arranged, the Chinese stockades were stormed at four points, to the east by six regiments under the Shye-weng-mhú, to the south by six regiments under Men:ngay-bala, to the west by seven regiments under the Let-wé-weng-mhú, and to the north by six regiments under the Laín-bó*. Some of the Burmese entered by ladders, whilst others entered by the openings which were made by elephants employed to butt against and throw down the gates and timbers. Although the Chinese with their general and the whole of their officers received the Burmese on the top of their works, and maintained a heavy fire, the Burmese, urged on by their generals, the Shye-weng-mhú and Let-wé-weng-mhú, succeeded in entering the works, when the whole of the Chinese rushed out of the western face, and joined the army which was before *Kaung-toŭn* under their generals Thu'-koun-ye' and Akoun-ye'. The Burmese generals having captured the Chinese entrenchments at *Shue-nyaung-beng*, with an immense quantity of guns, jinjals, muskets and ammunition, and horses and mules, placed a garrison of 5,000 men in charge of these stockades. The Let-wé-weng-mhú with ten divisions then proceeded and took post at *Naung-byit* on the north bank of the *Tsín-khan* river, four miles to the south-east of *Kaung-toŭn;* whilst the Shye-weng-mhú with ten regiments took post on the bank of the *Len-ban-gya* river, opposite to *Mó:yú* village, and eight miles distant from *Kaung-toŭn*.

The Wún-gyih then sent eight divisions of his fleet under the Mek-kha-ra'-bó and seven other officers to attack the Chinese boats

* Officer of *Lain*, a town and district near *Rangoon*.

which were blockading *Kaung-toŭn*. This attack succeeded; but the Burmese having returned to the Wún-gyíh with the boats and guns they had captured, the Chinese fleet rallied and resumed the blockade. The eight divisions of the Burmese fleet, as soon as they had refitted and repaired, again attacked the Chinese fleet, and after a severe engagement, forced the crews to jump on shore, and leave all their boats, guns, &c. of which the Burmese took possession. The Wún-gyíh's army then opened a communication with the garrison of *Kaung-toŭn*, and the Wún-gyíh sent 10 regiments under MEN:YE'-ZEYA-GYÔ to cross the *Eráwadí* below *Kaung-toŭn* to the eastward, and post themselves along the *Tsín-khan* river to the south-east of that town, so as to communicate with *Naung-byít*, where the Let-wé-weng-mhú was stockaded. The Wún-gyíh also sent ten regiments under MEN:YE'-YÁN-NAUNG to cross the *Eráwadí* above *Kaung-toŭn*, and to place themselves along the *Len-ban-gya* river to the north of that town, so as to communicate with *Moyú*, where the Shye-weng-mhú was posted. The Wún-gyíh also, in order to induce the Chinese to believe that strong reinforcements were daily joining him, made large parties of men, elephants and horses cross over every day from the west to the east bank of the *Eráwadí*, and at night brought them all secretly back again to the west.

The Chinese generals THU'-KOUN-YE' and AKOUN-YE', then summoned all their officers, and after describing the defeats which both their land and water forces had so repeatedly sustained, and the severe sufferings which their army was experiencing from the want of every kind of supplies, which the Burmese had intercepted, and observing that even if they succeeded in an attempt to force the Burmese armies around them, the Chinese troops would be unable to go far, owing to the scarcity of provisions, the Chinese generals proposed to depute a mission to the Burmese camp, in order to open a negotiation for peace, and for a passage for their army to *China*. This proposition being unanimously approved of, the Chinese generals addressed the following letter to the Burmese commander-in-chief:—

"The generals THU'-KOUN-YE', AKOUN-YE', and YUON-KOUN-YE' to the (Burmese) general. When we three, who were appointed to march to *Ava* by three different routes, were about to commence our march in the year 1129, (1767-8,) the (Burmese) general sent eight Chinese with a letter, stating that all sentient beings desired rest. We therefore delayed our march a year. Even now, we should be happy only to see our dispute settled, which it will not be for years, if we go on fighting. We are not come, because we want the Burmese dominions. If the sun-descended king (of *Ava*)

sends presents, as was the former custom, in the 16th year of the emperor of *China's* reign, we shall send presents in return. Our master the emperor's orders are: 'Fight, if they fight; or make peace, if they make peace.' We three generals, desirous of settling this dispute, have come with a moderate force only. In our Chinese country we are not accustomed to say more than one word, and are used to speak with truth and sincerity only. The present war has arisen from the circumstance of the Tsô:buáhs of *Theinní*, *Bá-mó*, *Mō:gaung*, and *Kyaing:yoŭn* having come and invited us. We will deliver up the Tsô:buáhs, subjects of the sun-descended king, who are now in *China*. Let them be restored to their former towns and situations. And after the (Burmese) general has delivered up to us all the Chinese officers and soldiers who are in his hands, let him submit to the sun-descended king and great lord of righteousness, and we will also submit to our master, the emperor and lord of righteousness, that the two great countries may continue on the same terms as they always were before; that all sentient beings may be at rest; that there may be no war; and that the gold and silver road may be opened."

The Kue-chow-bó* coming to the advance of the Burmese army with the foregoing letter on the 3rd December, 1769, the Wún-gyíh sent out some officers with a Chinese interpreter to meet the bearer of the letter. One of the Burmese officers, hearing that the object of the letter was to open a negotiation for peace, told the Kue-chow-bó, that in order to establish an important precedent, such negotiation ought to take place on the boundary line between *Ava* and *China*. The Kue-chow-bó replied, "Very true, but only say where the boundary is." The Burmese asked, if Buddhist pagodas were not built in the towns of *Hó-thá*, *Lá-thá*, *Mónú*, *Tsandú*, *Kaing:máh*, *Khanti*, and *Khan-nyen?* The Kue-chow-bó said that they were built, and that they are still in existence. The Burmese rejoined, the Chinese do not build or worship Buddhist pagodas, but the Burmese do; such buildings are erected throughout the king of *Ava's* dominions, and their existence in *Hó-thá*, *Lá-thá*, and the other towns, is a convincing proof of those places belonging to the king of *Ava*. The Chinese army ought therefore first to retreat beyond those towns, to the boundary of the Chinese empire at *Mó:myín* and *Kyeng-thi*. (*Kyang-si?*) The Kue-chow-bó then asked, if there is not such a place as *Ta-roup-mó* (Chinese point) in the king of *Ava's* dominions; and on being

* That is, "The officer of *Kue-chow* city;" but this name is generally written in Burmese history, *Kue-tsue-bó*.

answered that there is, below the city of *Prome*,—he asked, if the Burmese history and ancient records do not mention, that in a former king of *Pagan's* time, a Chinese army invaded the country and marched along the *Erawadi* as far as that place, which was thence called *Taroup-mó*;—and on again being answered in the affirmative, he observed, an army under the son, brother, and son-in-law of TSHEN-BYU'-MYÁ-YEN, king of *Pegu*, only came as far as those towns of *Hó-thá*, *Lá-thá*, &c. during the reign of that king, and built those pagodas;—but if you refer to the spot only to which an army may have happened to reach, the Burmese army ought, on the same principle, to retreat as far as *Taroup-mó**. The letter from the Chinese generals was then taken in to the Wún-gyih, who, after reading a translation of it which was made, sent word that all his officers had not yet joined him, and that the Kue-chow-bó must come again in four or five days.

The Wún-gyih summoned thirty of his principal officers and consulted with them as to the answer which should be made to the letter from the Chinese generals. They all recommended that no terms should be given;—but the Wún-gyih observed, that whenever the Chinese had heretofore erred and attacked *Ava*, the Burmese kings restrained their feelings and granted them peace, recollecting the long friendship which had existed between the two countries;—that even if the Chinese force then before them were entirely destroyed, the empire of *China* would still possess abundance of troops and population;—that if the Burmese refused to grant terms to the Chinese, when asked by them, and cut them to pieces, such a proceeding would be recollected for many successive generations with feelings of animosity and desire of revenge on their part, and the inhabitants of both countries would continue deprived of peace and quiet. For these reasons, the Wún-gyih gave it as his opinion, that terms ought to be granted to the Chinese,—and declared, that if the king of *Ava* disapproved of the measure, he would take the whole responsibility of it upon himself. The other officers acquiesced, and the Wún-gyih then addressed a long reply to the Chinese generals, recapitulating the causes and events of the war, and concluding with an inquiry, whether the Chinese generals desired to settle the dispute by arms or by negotiation. The Chinese generals THU'-KOUN-YE' and AKOUN-YE', (the latter here stated to be the emperor of *China's* son,) next sent a long letter addressed to the king of *Ava*, closing

* The ground on which the Burmese claimed *Hó-thá*, *Lá-thá*, &c. is precisely the same as that on which the Burmese of the present day founded their right to *Kubo* valley, *Manipur*, and even to *Chittagong* and *Dacca*.

with a request, that officers of rank and intelligence on each side, should meet and settle all points of difference; and with this condition, that the Chinese army should not retire until after the Burmese army was withdrawn; for, as the Chinese generals said, if we retreat first, we are afraid the Burmese army may follow and attack us, as was done at *Theinní*. This letter was brought to the outposts of the Burmese camp by the Kue-chow-bó and the interpreter NGA-MYAT-THUON-AUNG, on the 10th December, 1769. The Burmese officers who came out and met him, at first refused to take the letter, observing that the business must be discussed with them; that the king of *Ava* ought not to be addressed; and that, in fact, they dare not forward any such letter to him. The Kue-chow-bó assured the Burmese, that the person who had written the letter from the Chinese generals had made a mistake through ignorance, and that the letter was intended for the Burmese generals and officers. The Kue-chow-bó further proposed, that if the Burmese really desired to make peace, they should permit the Chinese army to retire freely to a suitable situation, at which the negotiation might be concluded; and displayed great anxiety for peace as soon as possible. The Burmese officers sent him back with a promise only to report all he had said to their general.

The Kue-chow-bó returned to the Burmese camp on the 12th of December, when the Wún-gyíh delivered to him a letter for the Chinese generals, expressing his willingness to negotiate a peace. The moment the Chinese generals understood the contents, they sent the Kue-chow-bó back to the Wún-gyíh, to beg of him to fix the day on which certain officers of the two armies should meet and discuss the matter. The Wún-gyíh appointed the following day.

On the 13th December, 1769, fourteen Burmese and thirteen Chinese officers of rank met in a large shed, which was erected for the purpose at the south-east angle of the town of *Kaung-toŭn*. On the part of the Chinese the Kue-chow-bó was the principal speaker, and on that of the Burmese, the Wún-dauk NE-MYÓ-MAHÁ-THURA. The Burmese demanded, that the Tsô.buáhs of *Theinní*, *Ba-mó*, and *Mó:gaung* should be immediately made over to them. The Chinese said, that these Tsó:buáhs were not in their camp, and affirmed with an oath, that they should be forwarded to *Theinní* and surrendered to the Burmese there, within six months from that date. The following treaty was then written on white paper with ink, and a copy delivered by the Chinese to the Burmese:—

"Wednesday, 13th December, 1769, in the temporary building to the south-east of the town of *Kaung-toŭn*. His Excellency the general

of the lord who rules over a multitude of umbrella-wearing chiefs in the great western kingdom, the sun-descended king of *Ava*, and master of the golden palace, having appointed, [here follow the names and titles of the 14 Burmese officers,] and the generals of the master of the golden palace of *China*, who rules over a multitude of umbrella-wearing chiefs in the great eastern kingdom, having appointed, [here follow the names and titles of the 13 Chinese officers,] they assembled in the large building, erected in a proper manner with seven roofs to the south-east of the town of *Kaung-toŭn*, on the 13th December, 1769, to negotiate peace and friendship between the two great countries, and that the gold and silver road should be established agreeably to former custom. The troops of the sun-descended king and master of the golden palace of *Ava*, and those of the master of the golden palace of *China*, were drawn up in front of each other when this negotiation took place; and after its conclusion, each party made presents to the other, agreeably to former custom, and retired. All men, the subjects of the sun-descended king and master of the golden palace of *Ava*, who may be in any part of the dominions of the master of the golden palace of *China*, shall be treated according to former custom. Peace and friendship being established between the two great countries, they shall become one, like two pieces of gold united into one; and suitably to the establishment of the gold and silver road, as well as agreeably to former custom, the princes and officers of each country shall move their respective sovereigns to transmit and exchange affectionate letters on gold, once every ten years."

The Burmese negotiators, after receiving the above treaty, applied to the Chinese to make over to them such boats as the Chinese still appear to have had near *Kaung-toŭn*. The Chinese promised to deliver the same after they had been employed in bringing up their stores to *Ba-mó*; but the boats were burnt on the same day by the Chinese generals, and some difference of opinion afterwards took place about them. Presents being exchanged between the Chinese and Burmese generals, and some sent by the Chinese to the king of *Ava*, the Chinese army began their march towards *China* on Monday, the 18th December, followed at a distance of a jinjal shot by the Burmese divisions under the Let-wé-weng-mhú and Shye-weng-mhú, until the Chinese reached the boundary of their country, when the Burmese returned to *Ba-mó* and *Kaung-toŭn*. At the same time, the Chinese commanders-in-chief having sent the necessary orders to that portion of their army which had marched towards *Mo-gaung*, that force also retired into *China*.

The Chinese armies having suffered long from want of provisions, those men only who were able-bodied succeeded in reaching *China*, and the forests and mountains were filled with countless numbers who died on the route from starvation.

When the officer, whom the Wún-gyíh sent with a report of the peace which had been concluded with the Chinese, and with a large quantity of silks and satins that had been received from the Chinese generals as presents for his majesty, arrived at *Ava*, the king disapproved of the conduct of the general and officers, for allowing the Chinese army to escape; refused to accept the presents, and ordered that the wives of the general and other chief officers should be placed with the Chinese presents on their heads, in front of the western gateway of the palace; and notwithstanding that the wife of the general-in-chief was a sister of the principal queen, she and the wives of the other officers were exhibited for three days at the appointed place, with the bundles of Chinese silks and satins on their heads.

The Wún-gyíh and other officers hearing how highly the king was displeased, were afraid to return to *Ava* immediately, and determined to go first and attack *Manipur*, the Tsô:buáh of which, they heard, had been fortifying himself again. In January, 1770, therefore, the Burmese army crossed to the westward of the *Eráwaaí* at *Kaung-toŭn*, and marched to *Manipur*, and although the Tsô:buáh of that place made arrangements for checking the progress of the invaders at every defile and narrow pass, the Burmese army succeeded in penetrating to the capital, when the Tsô:buáh fled with his family and as many of his adherents as he could, and concealed themselves in jungles and high hills. The Burmese army seized the whole of the population and property they found in the country, with the princess of *Mueyen*, *Tuonkó*, and princes HE'MÔ and TSANDA-YO'-KAY, and brought them to *Ava*, where they arrived on the 23rd of March, 1770.

The king, still displeased at the Chinese army having been allowed to escape into *China*, refused to see the Wún-gyíh and other officers of the Burmese army, and ordered them to be removed out of his kingdom into some other territory. They were conveyed to the eastern side of the *Myít-ngay*, which joins the *Eráwadí* near the north-east angle of the city of *Ava*; and two other Wún-gyíhs were also ordered by the king to be taken to the same place, for having presumed to speak to his majesty in favor of the general and other officers. About a month after, the king forgave the whole of them, and allowed them to return to *Ava*.

The Chinese generals, THU'-KOU'N-YE' and AKOUN-YE', returned and reported to the emperor of *China*, that having made peace with

the Burmese at *Kaung-toŭn* upon these conditions ; namely, that the Tsô:buáhs of *Theinni*, *Ba-mó* and *Mó:gaung*, subjects of the king of *Ava*, should be surrendered at *Theinni* ; that all the Chinese officers and soldiers taken prisoners by the Burmese in the years 1765, 1766, 1767, and 1769, should be given up ; and that ambassadors should be sent by both sovereigns once in ten years, the armies of both nations had retired ; and that two officers, the Kue-chow-bó and KYI'N:MEN:TI'TU'HA, had much distinguished themselves. The emperor of *China* was greatly pleased and desired to promote those officers ; but two of the imperial kinsmen, HÁ-TÁ-YI'N and TSHI'N-TÁ-YI'N, with two Tartar nobles, the governors of *Atsì-kyain* and *Maing:thin*, submitted that they should first be allowed to go down to *Mó:myín* and see how far the statements of the Kue-chow-bó were founded in truth. These four individuals accordingly came down to *Mó:myín* and sent a letter to the Burmese governor of *Kaung-toŭn*, in charge of a subordinate officer and upwards of fifty men ; but the governor finding from a translation of the letter, that its contents were very unfriendly, seized and confined the whole of the Chinese mission. A report of the Burmese governor's proceeding was immediately forwarded to the emperor of *China* at *Pekin*, who ordered the Kue-chow-bó to go down himself and see how the matter could be settled.

The Kue-chow-bó came down to *Mó:wún* with upwards of 1,000 soldiers, and sent a very civil letter to the governor of *Kaung-toŭn*, requesting him to release the Chinese party he had confined, and to send back with them the letter which had been addressed to him by the governors of *Atsì-kyain* and *Maing:thin*, by order of HÁ-TÁ-YI'N and TSHI'N-TÁ-YI'N. The governor of *Kaung-toŭn* immediately complied with this request ; and on the Kue-chow-bó perusing the letter, which had been sent to *Kaung-toŭn*, and finding its contents to be not only uncivil, but warlike and threatening, he forwarded it to *Pekin*. The emperor was exceedingly angry, and ordered HÁ-TÁ-YI'N and TSHIN-TÁ-YI'N, with the two Tartar nobles who had written the letter, to be sent up to *Pekin* in irons. HÁ-TÁ-YI'N died on the road, but on the arrival of the other three individuals at *Pekin*, the emperor ordered them to be executed. In the same year, in October, 1770, the caravans of Chinese merchants came down as before to *Ba-mó*, *Kaung-toŭn*, and other places in the Burmese dominions.

[To be continued.]

X.—*Notice on Balantium, a genus of the Pteropodous Mollusca; with the characters of a new species inhabiting the Southern Indian Ocean.* *By* W. H. BENSON, *Esq. B. C. S.*

In Vol. iv. J. A. S, page 176, I enumerated the genera of *Pteropoda* met with in my voyage from England, and noticed, under No. 11, a new perforate genus allied to *Cleodora*, which I marked as very rare, in consequence of the specimen which fell to my net having been the only one seen during the passage.

On looking over the plates of *Lamarckian* genera of *Testacea* given in the old series of the *London Quarterly Journal of Science*, Vol. XV. I met with a figure, No. 107, Plate VII., which bore a very near resemblance to the shell from which I intended to draw the characters of a new genus; and on reference to the letter-press, page 220, I found a note which had theretofore escaped my notice, containing the characters of the genus *Balantium*, which the anonymous translator proposed to establish in order to receive a shell taken by Mr. CRANCH, in Captain TUCKEY'S expedition to the *Congo*, and preserved with another shell, apparently of the same genus, in the British Museum. The writer assigned the shell provisionally to the family of *Hyalæana*, merely from the strong analogy which the substance of the shell bore to that of *Hyalæa*, until an opportunity should occur of obtaining more accurate information regarding a species so interesting. That opportunity has partly occurred to me, and I am enabled, by the discovery of a second allied species, to confirm, from an inspection of the animal, the correctness of the writer's conjecture regarding the location of the genus in the order *Pteropoda*. The following is the description of *Balantium recurvum*, as given in *Brande's Journal*.

"Shell transparent, very thin and fragile, hyaline, corneous, hastiform. apex recurved; open at both ends; superior aperture dilated, sharp-edged; inferior round, very minute; *sides acute;* superior disk undulated; inferior rounded; numerous transverse grooves on both sides."

The new species differs from the description in having no recurved termination to the shell, or at least the bend is so inconspicuous, as to be of no value as a character; the terminal aperture is also larger in proportion, being, in my specimen, nearly 0.05 of an inch in diameter. It has on one face three radiating longitudinal ribs, (one central and broadest, and two lateral.) The lateral margins are more regular than in *B. recurvum*, are destitute of the grooves which cross the shell transversely, and are provided with a groove running the whole length of their truncated edge, whence it happens

that they are bicarinate, instead of presenting a single edge or keel. The other face has only one broad central elevation, which expands gradually, and in proportion to the increase in width of the shell, towards the superior aperture. My shell is shorter in proportion than *B. recurvum*. I propose to describe it as

BALANTIUM BICARINATUM.

Testa compressâ sub-triangulari hastiformi, faciebus utrisque transverse sulcatis, superiori triradiatâ, radiis convexis, approximatis ad marginem superiorem provectum undulas tres formantibus; facie inferiore medio convexâ, abbreviatâ; marginibus lateralibus lævibus unisulcatis, sub-bicarinatis.

Long. 0.65, Lat. 0.5 poll.

Habitat in Oceano Indico Australi, non procul ab insulis Amsterdam et Sancti Pauli dictis.

I took the shell on the night of the 28th November, 1834, in S. lat. 36° 30′, and E. long. 75° 30′, in company with *Janthina exigua* and another small flat spired species, *Cleodoræ*, *Hyalæa*, a small *Cephalopode* of the genus *Cranchia*, an independent floating *Anatifera*, and a crustaceous marine *Centipede*. With the exception of a protrusion of a small portion of the *Molluscum* at the apex, the animal was very similar to that of *Cleodora*, but having been crowded with too many specimens in spirits of insufficient strength, it decayed, and was no longer recognizable, when I had an opportunity of substituting a stronger preservative liquor.

I observe that DE FERUSSAC, in his enumeration of the species of *Pteropoda*, contained in No. 262 of the *Bulletin des Sciences*, has referred *B. recurvum* to the genus *Cleodora*, as *C. Balantium*. As the only habitat given by him is *Congo*, it is evident that he was possessed of no information in addition to that contained in the *Journal of Science*, and that he had arbitrarily assumed the specimen to be defective in the apex. The discovery of another species with a similarly perforated extremity, and a like flattened form, should cause us to hesitate before blotting out the genus indicated by the writer in the *Journal of the Royal Institution*. Nothing but the discovery of an imperforate specimen should now permit its annexation to *Cleodora*, between which and *Hyalæa* it appears to supply a void. The parts of Pelagian shells which are most subject to injury are the delicate edges of the apertures, not the imperforate apices, which even in the tender spinous terminations of the *Cresides* and *Cleodoræ*, are always met with in a perfect state. *Cuvieria* forms no exception to the rule, as, in that genus, the spinous termination is cut off by a diaphragm, and the derelict portion, therefore, follows the ordinary rule observable in

truncated shells. The terminal volute of *Carinaria* is also liable to decadence, but no perforation is visible in the injured part.

I think that the preceding observations will tend to uphold the claim of *Balantium* to rank as one of the prominent types of form, which, for convenience' sake, are termed genera, and that it is desirable that the anonymous institutor of it should claim his property, in order that we may know to whom we should rightly attribute its first indication.

The other species noticed in the *Journal of Science*, as preserved in the British Museum, would appear, from the figure referred to in PARKINSON's Introduction, to be a *Cleolora* which we met in a tract of the Indian Ocean contained between the parallels of 30° south and 3° north, and the meridians 86° and 92° east; but PARKINSON's figure does no justice to the form of that truly elegant and delicate shell.

XI.—*Additional fragments of the Sivatherium.*

Before Colonel COLVIN's departure for Europe, we requested permission to take a cast of the beautifully preserved lower jaw of the *Sivatherium* which he exhibited at the Government House scientific party in January last. In further token of his zeal for science, and of his ever-readiness to oblige, he has, even in the hurry of embarkation, favored us with the accompanying lithographic drawings of the same jaw, and of the larger fragment of the occiput also on its way to adorn some cabinet of fossil osteology in his native land. This fragment is the more valuable on account of its being perfect in the parts deficient in Dr. FALCONER's specimen published in the *Asiatic Researches*, vol. xix.* We subjoin the Colonel's note explanatory of the drawings, (Plates VIII. IX.)

"I herewith send you two plates of the *Sivatherium*, one of the portion of the head I was fortunate in having brought in from the lower hills below and west of *Náhan* just before I left *Dádúpur*. It arrived encumbered with a good deal of hard sandstone matrix, most of which I had cleared away. This specimen is valuable, though it has no teeth, from having the occiput very entire, and from its proving the accuracy of Dr. FALCONER's assumption, founded on examination of the original head, that the animal had four horns with bony cores, as this has the offset of one of the back branched horns very clearly marked; suitable to which I may mention that Captain CAUTLEY has found in his collection a large flat horn. In this Plate, *fig.* 1

* See Journal Asiatic Society, vol. v. January.

SIVATHERIUM

occiput

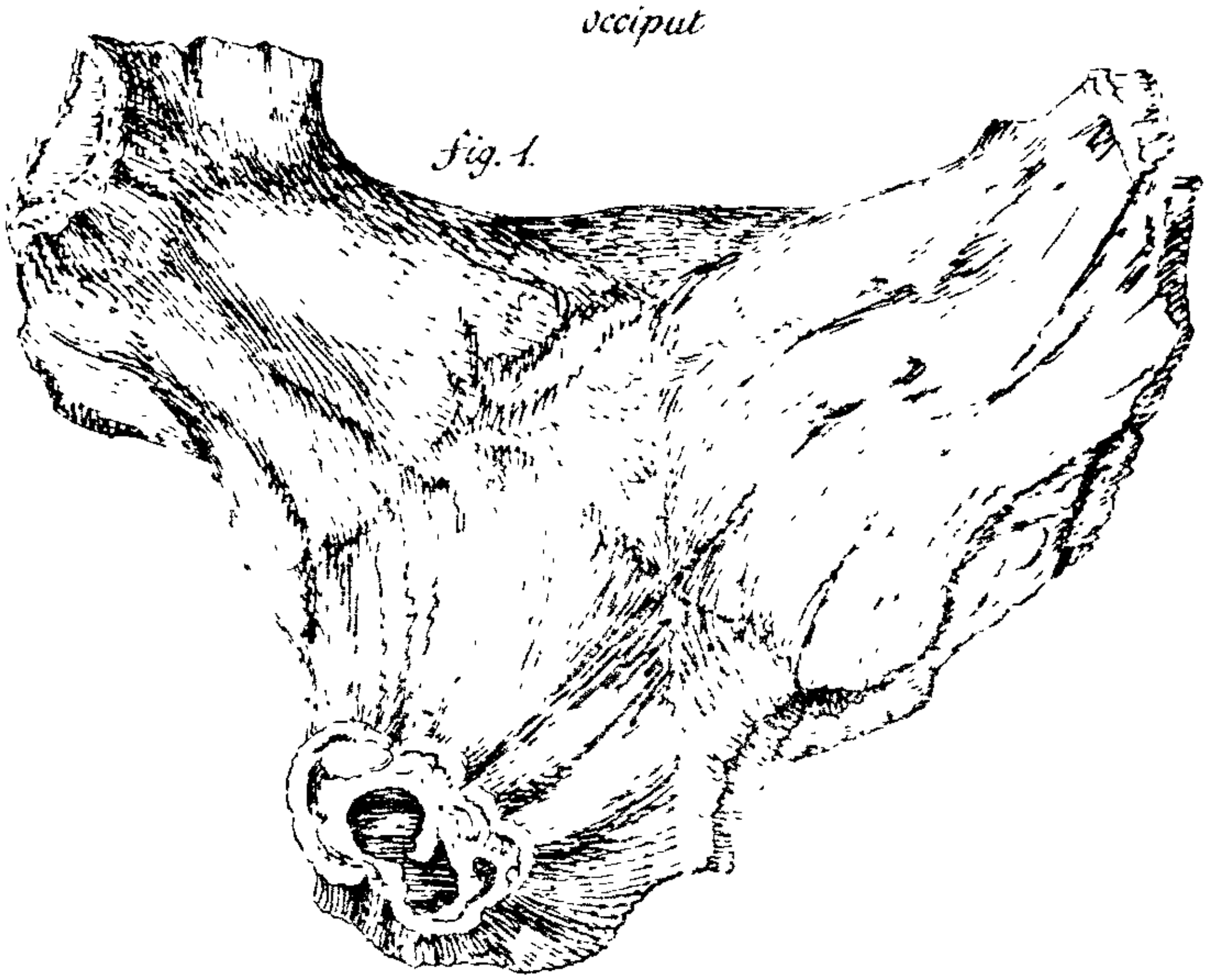


fig. 1.

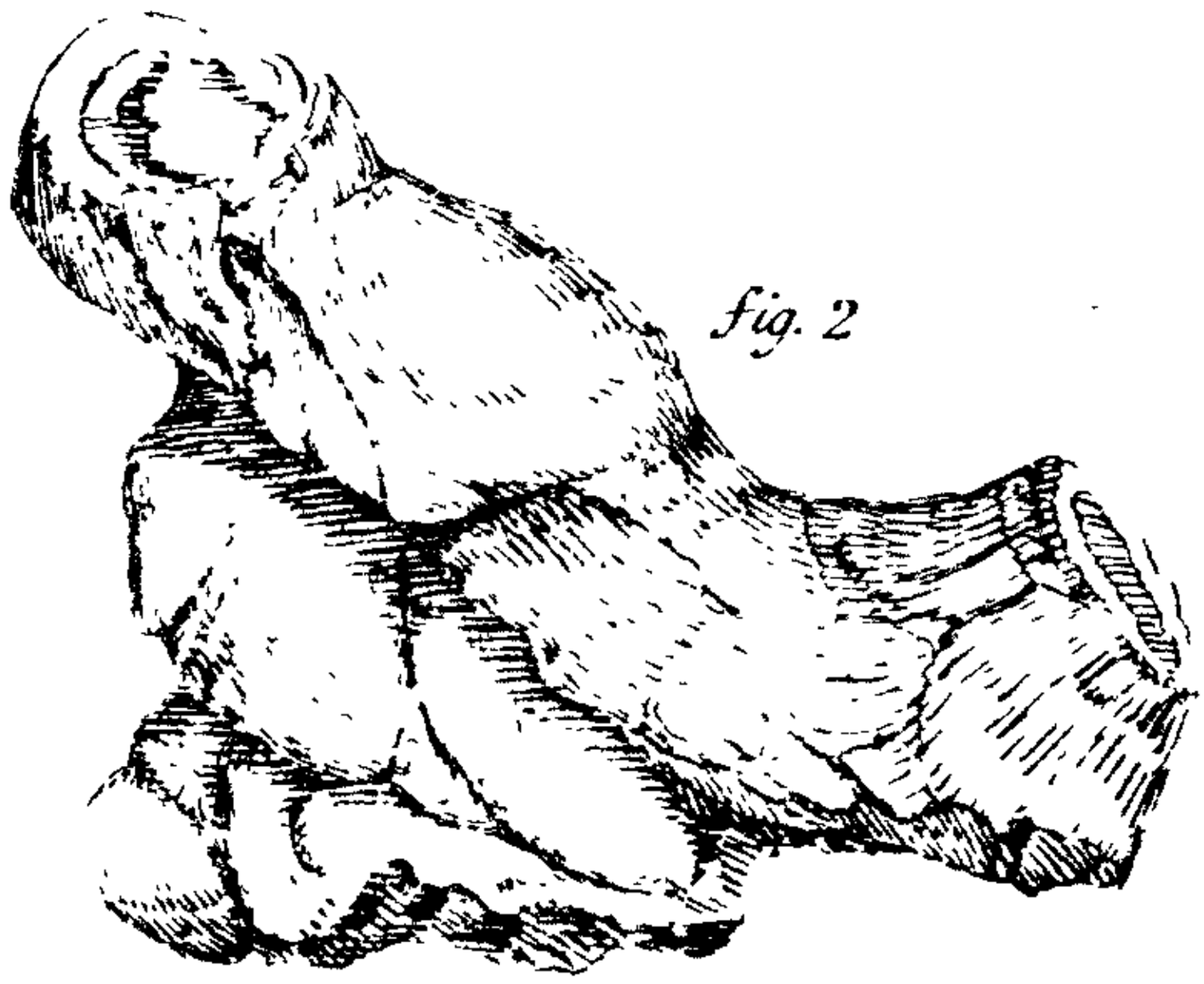


fig. 2

fig. 3

Scale ½ Natural size.

SIVATHERIUM

lower jaw

fig. 1.



fig. 2

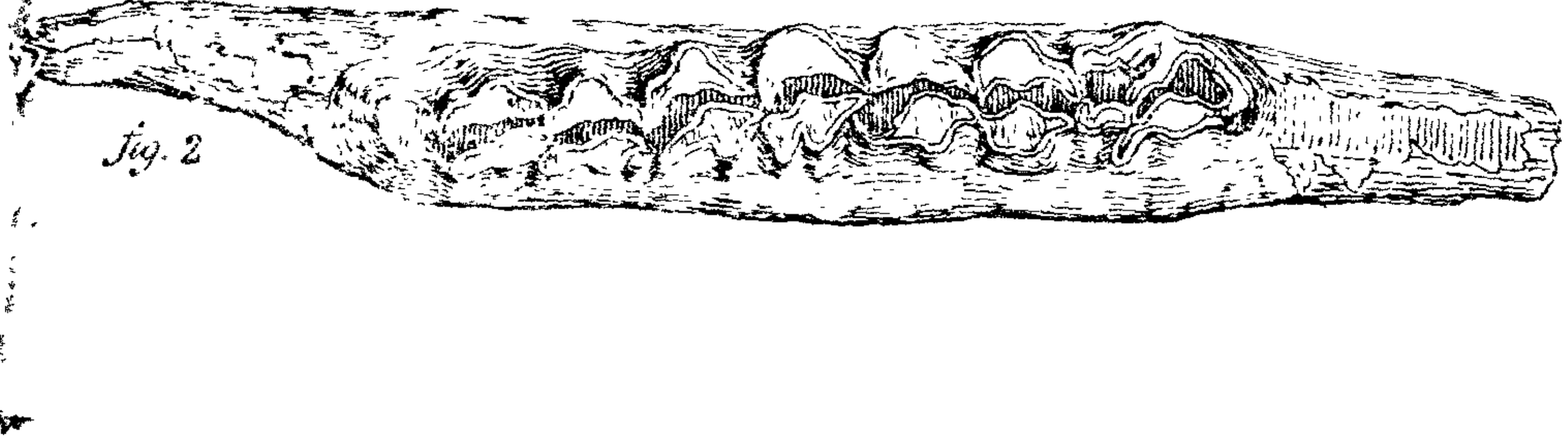


fig. 3.



Scale $\frac{5}{12}$ths of natural size

represents a front view of my fragment; *fig.* 2, a side view of the same, showing the setting on of the new horn, and the rise of the front one over the eye; *fig.* 3 is a view of the occiput:—the whole appear partly distorted from occurrence of a shift. For the left lower jaw of the *Sivatherium*, delineated in the 2nd Plate, I am indebted to Conductor W. Dawe, of the Canal Department, for whom it was brought in, inclosed in a mass of similar sandstone, from near the sources of the *Sombe* river, north of *Dádúpur* and east of *Náhan*, shortly before I came away. It is a very perfect and beautiful specimen, with its molars, four in number, almost quite entire, and is the specimen which you have moulded.

Fig. 1 is of the outside of the left lower jaw.

Fig. 2, ditto crown of the teeth, in which I have endeavoured to be accurate in drawing the flexures of the enamel.

Fig. 3 is of the inside of the same jaw.

In *fig.* 1 I have hardly had the jaw perpendicular when drawing it, as it does not sufficiently express the great height of the inner range of the molars over their outer edge, which a cross section would have better shown; but as the specimen is gone on board, I cannot now make it."

XII.—*Note on the Hotspring of Lohand Khad. By Capt.* C. M. Wade.

Near the village of *Bhasra* and the source of the *Lohand Khad*, (a rivulet, which flows into the *Satlaj* from below the ridge on which the fort of *Chambá* is situated,) there is a mineral spring, the water of which has a strong saline taste, and is said to be very efficacious in cases of goitre, dropsy, and rheumatism. Many people are in the habit of resorting to it from the neighbouring country annually in the months of May and June, December and January, to drink its water, both for the cure of these complaints, and to benefit by the salutary effect it is supposed generally to have on the constitution. A course of seven days is considered sufficient to affect the patient with its peculiar qualities. It is drank early in the morning and at meals, and has a slightly aperient quality. While drinking the water it is necessary, in the opinion of the natives, to observe a strict regimen, eating nothing but dry wheaten cakes kneaded with the water of the spring, and occasionally a few grains of black pepper. When the actual course of drinking is over, abstinence from salt in any form is enjoined for the seven following days. During the hot months it is visited chiefly by those who are affected by goitres. In the cold months it is found to be beneficial in scrofulous complaints, as well

as dropsy and rheumatism. When taken for rheumatic affections the body is said at first to swell and to subside after the water has been drunk the regulated time. Persons of wealth, and those who are not able to proceed to the spring, send for the water from a distance at the proper season, in order to go through a course of it. There are no habitations near the spring of a permanent description. Those who resort to it, generally amounting to two or three hundred at a time, erect temporary sheds for themselves while they remain. The soil is argillaceous, of a reddish blue tint. Though situated near the source of the *Lohand Khad*, there appears to be no connection between the spring and that rivulet, excepting in the rainy season, when the inundation is stated to impair the efficacy of the water, and neutralise its saline taste. The dimensions of the spring are about three feet broad and five deep. It is immediately on the frontier of the *Khalúr* and *Handúr* territories. *Lohand Khad* forms the boundary between these two States, and flows into the *Satlaj* near *Kiralpúr* in the valley of *Makhowal* above the town of *Ropur*. No sacred character seems to be attached to the spring any more than the reverence with which the Hindus are accustomed to regard these phenomena of nature in all situations. It does not appear to be frequented by any pilgrims, who are led to it from religious motives alone. The *Khalúr* rája attempted some years ago to levy a tax on those who come to drink the water, but was diverted from his purpose by the advice of Captain Murray, to whose authority he was subject, for his possessions on the left bank of the *Satlaj*.

[The analysis of this and numerous other specimens of water will be given hereafter.—J. P.]

XIII.—*Proceedings of the Asiatic Society.*

Wednesday Evening, the 1st March, 1837.

W. H. Macnaghten, Esq., Vice-President, in the chair.

Messrs. J. M. Mill and W. Cracroft, proposed at the last meeting, were ballotted for, and duly elected Members of the Society.

H. Torrens, Esq. was proposed by Mr. H. T. Prinsep, seconded by Mr. Macnaghten.

Col. Hezeta, proposed by Major Taylor, second by the Secretary.

Mr. W. Storm, proposed by Mr. Bell, seconded by Dr. Wallich.

The Secretary proposed the Bishop of Cochin-China as an Honorary Member, seconded by Mr. W. H. Macnaghten ;—referred to the Committee of Papers.

Read a letter from Captain H. Harkness, Secretary to the Royal Asiatic Society, acknowledging the receipt of oriental works published by the Society.

Read a letter from H. T. Prinsep, Esq. Secretary to the Government of India, General Department, communicating the following extract from a Letter, No. 15, of 1836, from the Honorable the Court of Directors, dated the 14th September, 1836.

Para. 4. We learn from the *Journal of the Asiatic Society* that you have recently transferred the European portion of the Books of the Library of the College of Fort William to a Public Library in Calcutta, and the Oriental Works to the Asiatic Society of Bengal. We observe that this measure is made dependent upon our sanction, but as we are not aware of the reasons which recommended such a distribution, we refrain at present from issuing any directions upon the subject. With regard to the manuscripts, however, it is probable that the collection comprizes many copies of several of the works or duplicates of those previously in the possession of the Asiatic Society; and we direct that in all such cases two copies be forwarded to us without awaiting the receipt of our decision upon the arrangement which you have made for the distribution of the contents of the College Library. We, at the same time, desire that you cause to be prepared and forwarded to us by the first opportunity, a list of the several works, both European and Oriental, which are included in the arrangement now referred to.

Ordered,—that a list be prepared of the works included in the Court's requisition, and that the manuscripts in question be separated for transmission home through the Government.

The Secretary noted the sale of 2,000 Rupees Company's Paper with which the Printer's bill had been discharged.

Read a letter from Monsieur S. L. Laporte, Secretary to the Linnæan Society at *Bordeaux*, proposing a mutual correspondence and interchange of objects of natural history, which M. Laporte also offers to individual members from his own rich collection of Zoology.

Read a letter from Professor Othm. Frank of *Munich*, acknowledging the receipt of Oriental works published by the Society, and suggesting a list of some of the principal Sanscrit works which it would be desirable to undertake, on the completion of those now in hand.

Mr. E. V. Irwin presented on the part of the author, a duplicate of the Chronological hypothesis signed Veritas, which was received from *Van Dieman's Land* some months ago.

Library.

Dr. Wallich presented a continuation of the Meteorological Register kept at the *Mauritius*, by M. Jules Desjardins.

Mr. D. O. Dyas Sombre presented a finely illuminated copy of the Gulistán, supposed to have been copied for the emperor Aurangzeb at *Bijápúr*, and lately belonging to the Begum Sombre's library.

Read a letter from J. Bell, Esq., Secretary to the Agricultural and Horticultural Society of Calcutta, forwarding for presentation a copy of the 3rd vol. of its Transactions.

Mr. Johannes Avdall presented a map of *Armenia*, published at *Venice*, in 1778.

Notice Historique sur Charles Telfair, Esq. late President of the Societé of Natural Histoire of Mauritius, by M. Julien Desjardins, Secretary to the Society—*presented by the author.*

Narrative of the wreck of the *Lady Munro* on the isle of *Amsterdam* in 1835, —*by Dr. M'Cosh.*

The following books were received from the booksellers:

Buckland's Bridgwater Treatise, Geology and Mineralogy, Vols. I. and II.
Lardner's Cabinet Cyclopedia: Foreign Statesman, Vol. 3rd.

The following works translated and published by Mr. Lewis Da Costa, were presented on his part by Mr. George Hill.

4 vols. 4to. Elements of General History, in Hindústaní.
1 vol. ditto, The Book of Common Prayer, in Persian.
1 ditto, ditto, ditto, ditto, ditto, in Hindústaní.
1 ditto, 8vo. ditto, ditto, ditto, ditto.
1 ditto, ditto, ditto, Abstract, ditto, ditto.
1 ditto, 4to. The Penal Code, in Persian.
1 ditto, ditto, Regulations of Distress, Replevin and Sale, &c. of Lands, do.

Museum.

Mr. DYAS SOMBRE presented to the Society, through Dr. BURLINI, the sword of her late Highness Begum SOMBRE, which she had worn from the year 1778 to the day of her death, and which was always kept by her bedside.

A collection of models of the human hand and foot in plaister of Paris, was presented on the part of Mr. C. W. SMITH.

Dr. WISE, Principal of Húghlí College, intimated that he was desirous of forming a museum in connection with the Húghlí College, and would be happy to receive any duplicates which the Society might be able to spare.

The following memorandum and proposition were submitted by Captain CUNNINGHAM:—

"Having been engaged during the past month in arranging the coins in the Cabinet of the Asiatic Society, I beg to submit to the Members of the Society the following observations upon their collection.

1. The collection of coins belonging to the Asiatic Society is so exceedingly meagre in every series of coins that would be of use to the historian and to the antiquary, and, at the same time, the individual specimens are so very poor in point of preservation, that the whole number of coins, which have been many years in collection, is scarcely deserving of the name of a Cabinet. To prove the meagreness of the collection, I need but to subjoin a list of the coins now in the Cabinet of the Society, in which the only really valuable specimen is a gold coin of MAHENDRA GUPTA.

List of the Coins in the Society's Cabinet, with their value.

		Co.'s Rs.
1	Gold coin of MAHENDRA GUPTA,	30
52	Dekkany gold hoons; some small, others minutely small,	60
7	Modern gold coins, chiefly Nipálese,	25
42	Indo-Scythic coins, including some rudely executed base gold coins,	50
26	Grecian, Arsakian and Sassanidan,	50
30	Músalmán and Nipálese silver coins,	30
227	Músalmán pice, all exceedingly common, except a Mahmud,	11
281	Dekkany pice—mostly modern and wanting inscriptions—nearly worthless,	5
115	small silver coins—punch marks and Varáha series, *all bad*,	25
156	Chinese and Japanese,	5
25	Continental silver coins,	35
221	Roman coins,	120
		446

2. It is a fact, which must be known to most of the Members, that the Society's collection has not been increased during the last two or even three years by the addition of a single coin; or, in other words, that since private individuals have commenced the collection of coins, there have been few, if any, presented to the Society's Museum: most persons finding more pleasure in obliging a friend, by presenting to him any coins that they may pick up, than in displaying their public zeal by making a donation of them to the Society. I therefore beg to propose,—

As the Society's Cabinet has not been increased during the last three years by the donation of a single coin, and, as from the number of private individuals now collecting coins, there is but little likelihood of any donations being made for the future,—

That the Society do either increase their collection of coins by purchasing such as may offer from time to time, in order that their Cabinet, at present nearly valueless, may be useful to the Antiquary in the elucidation of doubtful points in history,—

Or, that the Society do sell their present incomplete collection to the highest bidder, and apply the proceeds either to furnishing the Museum with subjects more generally interesting or with furniture indispensably necessary."

The general opinion of the Meeting was adverse to the sale of the Society's Cabinet, its preservation being no source of expense; and it was to be hoped opportunities might occur of rendering it more important and rich.

Mr. BELL submitted the following communication on the subject of the statistical inquiries suggested by the Royal Asiatic Society. The author was thanked by the Chairman for his offer to draw up a series of papers on staple products of India, and his note was ordered to be made over to the Statistical Committee.

To JAMES PRINSEP, Esq.
Secretary, Asiatic Society.

SIR,

I have read with much satisfaction a pamphlet presented at the last Meeting of this Society, containing a highly interesting paper drawn up by the Right Honorable HOLT MACKENZIE, and JOHN FORBES ROYLE, Esq, "having for its object the formation of a Committee of Agriculture and Trade in relation to the East."

Conceiving, with advertence to the circular, which accompanied this pamphlet, from the Right Honorable Sir ALEXANDER JOHNSTON, Chairman of the Committee of Correspondence of the Royal Asiatic Society, that any information derived from authentic sources, however incomplete, will be acceptable, I feel desirous to become a humble laborer in a field in which I have, from my arrival in India (16 years) felt peculiar interest; by submitting to the Society, for transmission to the Committee of Correspondence in England, if approved and deemed worthy, the results of information I have endeavoured faithfully to collect on the various productions of India.

It may be deemed presumption in me to propose to myself this task, in the face of so serious an imputation as is borne on the circular in question; viz. "Few in India know what England requires; and none of the lights of modern science having been applied to the agriculture of the former country (India), its productive powers have, as yet, been very imperfectly developed."

However undeniable this position is, I hope it may be conceded that there are those in India who are equally ready to impart the little information they do possess on the subject which is to engage the attention of the Committee of Correspondence, as the members of that Committee can possibly be to collect and arrange it.

Impressed with the importance of, and great advantage likely to be derived from, a share of public attention being paid to Statistics in this country, I endeavoured to draw notice to the project of forming a Society, by a communication which appeared in the *India Gazette* of the 15th or 16th of August, 1834, under the signature of "*A Friend to Improvement;*" and I now rejoice that, although I failed in attracting attention to the scheme, the matter has been recently taken up by an able Committee of this Society, for the purpose of collecting and condensing statistical information generally.

I mention this circumstance only that I may not be thought to write for writing's sake, or to offer suggestions and make promises that are frequently made on the impulse of the moment when any new scheme is adopted, without due deliberation, or without thoroughly understanding the nature of the obligation. I have studied the subject long, and the longer my reflections are brought to bear on Indian Statistics, so much the greater is my desire to be of the least service in endeavoring to develope the resources of this country. And the only excuse I can venture to offer for having been so long a silent and useless observer, is the fact experience has taught me, that to *publish* information of utility at one's own expense in India, is a serious and losing affair; while, to throw away information, or give it to those who do not appreciate it, is an equally unprofitable task.

A depository has now been opened for the reception of all useful communications by the formation of two Committees almost simultaneously, for the same purpose, and these at a distance of some 12,000 miles from each other,—a coin-

cidence which ought to convince the most sceptical of the demand for information, by no means scarce, but which, for the reasons I have stated, has been kept back by some, scattered to the winds by others, or carefully locked up in Government offices; and now in the year 1837, when any question in political economy is agitated, there is not in all India a book of general reference. What is the consequence? A question that in England would be settled in a month, requires in India at least a year to collect data on which to frame a report.

Now, the least advantage that may be expected from the labors of these Committees, will be a ready reference to all matters relating to political economy, and a sure guide to future legislation. Instead of groping in the dark, and seeking information from numerous and doubtful sources, it would be found carefully collected and condensed from the best authorities at one and the same point.

So grand a design could not be compassed by any one individual, even were his whole time and attention devoted to its accomplishment, and life ten times its present span. But in the hands of a Committee there is no reason to apprehend failure, and I think, that as soon as the objects of the Committee are sufficiently explained and made known, there are many who will willingly and zealously contribute all they can to the general fund.

Without taking up more of the Society's time, (and I beg pardon for this intrusion,) I may merely add that I shall be glad to undertake a series of essays on the principal productions of India. For example, I would begin with "*Cotton*," which, as Mr. Holt Mackenzie justly observes, "had become almost a necessary of life to a large proportion of our manufacturers; and it was fearful to think how much we depended for it on a single source of supply."

Without meaning to question the accuracy of this argument, I think I could, without much difficulty, shew, that the English manufacturer is not so entirely dependent on a single source, as it is generally supposed; for these deductions were drawn from what India *has* produced—not from what India *can* and *may* produce.

2. I would endeavour to point out the obstacles that have existed to improving an article now of such vast commercial importance; and how these obstacles can be best removed.

3. What the capabilities of this country are, supposing political events compelled the British manufacturer to depend for supplies of cotton on India alone.

4. The average prices of Indian cotton in the English market for the last twenty years, contrasted with those of American and other foreign grown cotton.

5. That India is capable, under ordinary care and encouragement, of maintaining a successful competition in the British market with any foreign country.

6. The probable quantity of land in India formerly occupied by cotton, which has been thrown out of cultivation, by the great influx of British Twist, and the extent to which this cultivation may be brought back by introducing a superior staple and improved mode of culture.

These remarks would be founded on sound calculations deduced from tabular statements, as well as actual experiment, and not on theoretical argumentation.

Cotton, as I have said, would be the subject of my first essay—which would be followed by a similar statistical view of our Indian *Silk* trade. *Sugar* would thirdly engage my attention, and so on until the list of staples had been completed.

From these I should descend into the hitherto less explored, though not less interesting regions of agriculture, and try to discover whether there are not many productions now left entirely to nature, that could not, with a little attention, be rescued from unmerited oblivion, and brought to form a valuable addition to the Materia Medica, and to the present list of exportable products.

I have the honor to be, &c.,

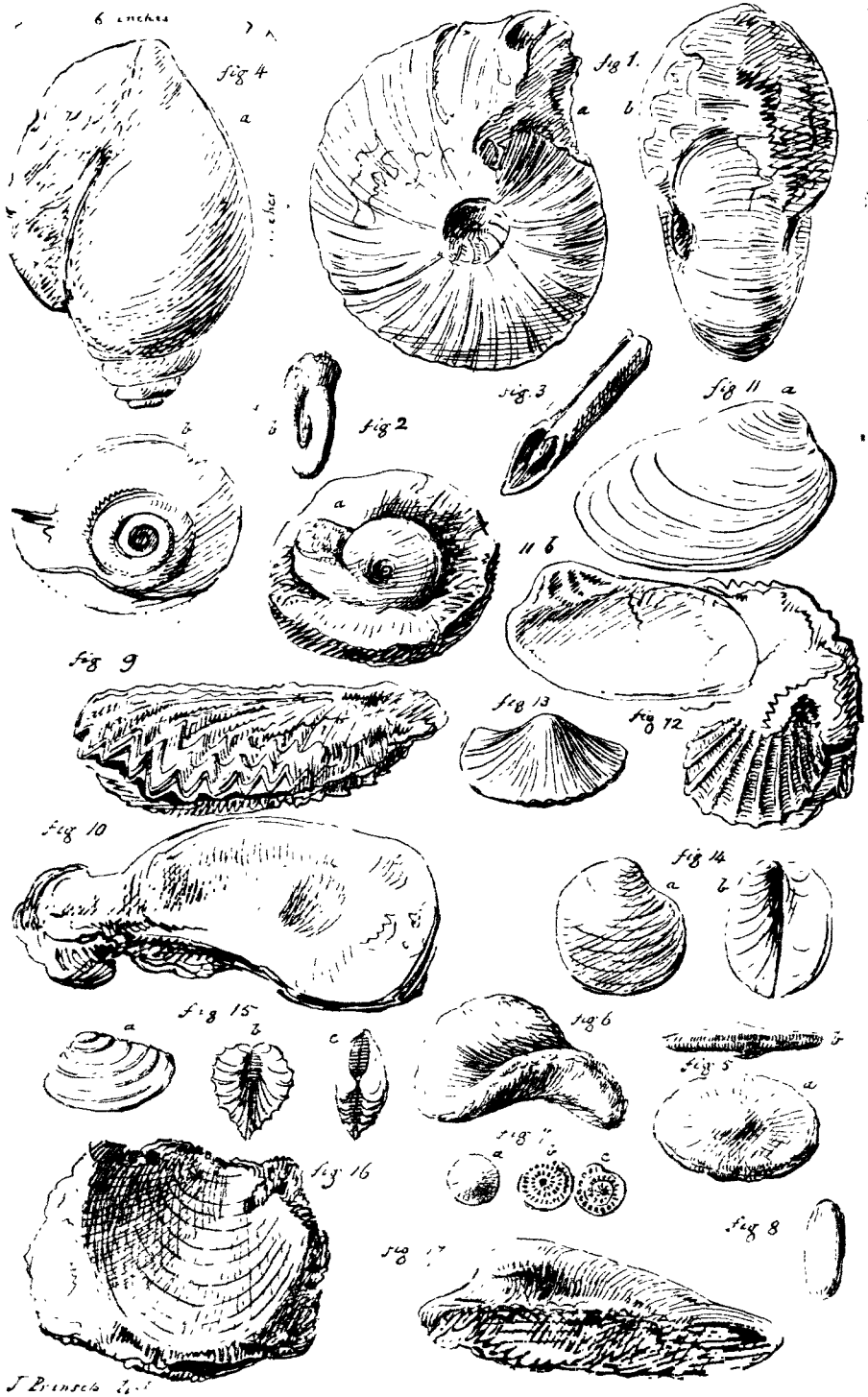
Calcutta, 23rd February, 1837. John Bell.

Physical.

A very large stuffed specimen of the Ornithorynchus paradoxus was presented by Mr. E. V. Irwin.

A letter from Lieutenant N. Vicary, dated *Sydney*, 28th October, 1836, announced his having dispatched, under care of Captain Davidson, of the *Lady Kennaway*, a box containing a series of the fossil shells of *New South Wales*.

Fossil Shells of the Chari hills in Cutch



Captain EDWARD H. HARRIS, Commodore on the *Surat* station, presented a box of fossil bones from the *Perim* island in the Gulf of *Cambay*, which he had procured after much difficulty expressly for the Society.

Among these are several very perfect bones—an alligator's head differing from that sent by Lieutenant FULLJAMES—a buffalo's horn—a very large vertebra—a well preserved mastodon's tooth in iron-sand conglomerate—and numerous other fragments.

Captain A. BURNES' series of the geology and fossil conchology of the *Chari* range in *Cutch*, arrived since last meeting, was laid on the table.

"These specimens" (Captain BURNES writes) "are duplicates of what I forwarded to the Geological Society of London about six months ago. Professor LYELL had cursorily looked over them, and a friend writes of some others which had been sent from the same spot: 'Mr. LONSDALE is decidedly of opinion that the fossils are much more different specifically from European secondary fossils, than those received from *Cutch* a few years ago.'"

The principal varieties of these shells, are sketched in the accompanying plate, (ix.) but it is impossible, from the imperfection of most of them in essential parts, to name them with accuracy.

From the *Chari* hills, fig. 4, a large buccinum (?) 8 inches long;—ammonites of several species (1, 2,) enclosed in wacken balls,—sometimes mineralized with a fine red ochre; belemnites, 3, occurring with and inclosed in bivalves 11, 12, 14;—ostrea, two varieties, 9 and 10. From *Wagne*, east of *Bhooj*, the same shelly conglomerate, containing a variety of bivalves, 11, 15 and 16; pecten 16 and 17 (arca ?) with large ammonites, &c. From *Liseput*, the principal shells are nummulites 5, 6, 7,—some curiously curved in a saddle form;—and small egg-shaped radiata, 9, pentacrinites?

The geological matrix of the *Chari* and *Wagne* specimens is a yellow ochreous limestone similar to the lithographic stone from *Jesulmir*: one specimen has much the appearance of oolite. Also crystallized sulphate of lime, vesicular basalt with zeolites and green earth, septarium iron clay, iron sand, and fossil wood.

From *Hyderabad*; gypsum cryst. compact sandstone and lias (?).

Wara Vechia; granular granite, passing into sandstone basalt—decomposed felspar.

Balmer, south of *Jesulmir*; sienite lithomargic conglomerate, white porcelain clay, red ochre balls.

Liseput; light clayey limestone—and porous basalt.

Paccham island; sandstone and coarse pebbly conglomerate, yellow limestone and gypsum, as before.

Naitra; a basaltic grit.

Tramlow, six miles N. W. of *Bhooj*; iron pyrites.

Toomra; porous red iron clay.

Angier; hillocks of wacken pebbly conglomerate, same as from *Mujjul*; and close-grained basalt from a cone 200 feet high.

Dharaiyo; iron veins in sand, worked as an ore; fossil trunk of a tree found in the soil.

Mhur; lithomarge, yellow clay, iron conglomerate.

Badra; continuation of the yellow limestone, with pectens and cytheria?—(16).

Jeradar; low hillocks of a porous light grey volcanic tuffa.

The volcanic field of this province deserves a minute examination—and it is much to be regretted that Captain BURNES did not favor the Society with sections and maps of the country to elucidate his specimens. This enterprising officer is again employed on a mission to *Sinde*, whence we shall doubtless soon hear of fresh researches and discoveries.

Dr. PEARSON read a memorandum on the *gaur* and *gayal*, in justification of the name given to the specimen of the former in the Society's museum.

[This note and Mr. EVAN'S, read at the last meeting, will be published in our next.—ED.]

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of February, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.			Observations at 4 P. M.							Calculated Humidity.			Temperature of water at 10 A. M.		Rain.	Wind.		Weather.	
	Old Stand. Barometer at 32°.	New Stand. Barometer	Thermometer	Temperature of wet-bulb	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Do. by dew-point.	Old Stand Barometer at 32°.	New Stand. Barometer	Thermometer	Temperature of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Do. by dew-point.	River.	Well.		10 A. M.	4 P. M.	Morning.	Evening.
1	30,061	30,1[illegible]	[illegible]	1,6	2,1		91	90	80		29,960	[illegible]	[illegible]	9,3	11,0		71	52	45		71,2	73,7		S. W.	S. W.	cum. stra.	fine.
2	,047	[illegible]	[illegible]	1,7	2,0		91	90	80		,945	[illegible]	[illegible]	9,0	10,5		76	55	52		67,4	72,6		S. W.	o.	cumuli.	do
3	,094	[illegible]	[illegible]	2,7	3,2		90	85	78		,964	[illegible]	[illegible]	9,0	12,0		70	45	44		72,3	73,7		o.	N.	cir. cum.	do
4	,113	[illegible]	[illegible]	3,9	5,0		87	80	72		,985	[illegible]	[illegible]	9,5	17,1		61	34	33		68,7	73,6		N.	o.	cum. str.	do
5	,030	29, [illegible]	[illegible]	1,6	3,2		90	42	78															S.		cumuli.	
6	,957	[illegible]	[illegible]	6,9	7,8		82	65	63		,843	[illegible]	[illegible]	9,2	12,2		74	52	49		71,7	72,3		S. W.	SSW.	cu. calm.	fine.
7	,007	[illegible]	[illegible]	4,3	5,3		89	77	76		,933	[illegible]	[illegible]	9,7	15,6		68	40	41		72,3	74,3		S. W.	S.	clear.	do
8	,070	30, [illegible]	[illegible]	5,8	7,2		82	70	63		,986	[illegible]	[illegible]	9,3	16,9		65	35	37		72,9	73,6		N.	S. W.	do	clear.
9	,054	[illegible]	[illegible]	9,3	[illegible]		77	55	54		,923	[illegible]	[illegible]	5,3	15,6		68	39	41					W.	S. W.	cumuh.	do
10	,000	29, [illegible]	[illegible]	5 2	[illegible]		85	75	68		,872	[illegible]	[illegible]	9,9	13,6		71	47	45					S.	S.	clear.	do
11	29,909	[illegible]	[illegible]	6,6	6,0		84	70	66		,805	[illegible]	[illegible]	9,8	18,9		62	32	34					S. W.	sw.	do	do
12	,845	[illegible]	[illegible]	4,4	5,0		88	80	74		,680	[illegible]	[illegible]	9,9	7,4		82	65	63					S.	S.	cum cir.	storm y.
13	,949	[illegible]	[illegible]	4,8	4,6		89	75	76		,884	[illegible]	[illegible]	9,8	7,0		83	67	64				1,00	ne.	N.	threatning.	overcast.
14	30,101	30,1[illegible]	[illegible]	6,9	3 [illegible]		74	47	49		30,013	3 [illegible]	[illegible]	9,3	14,9		65	32	37		65,0	66,3		nw.	N.	clear.	clear.
15	,136	[illegible]	[illegible]	11,6	2,6		68	40	41		29,996	[illegible]	[illegible]	9,0	14,3		61	27	32		69,8	71,6		n.	N.	do	do
16	,014	[illegible]	[illegible]	9,0	7,6		79	57	57		,929	[illegible]	[illegible]	9,0	12,6		73	42	48		68,1	71,3		s.	S. W.	do	do
17	,087	[illegible]	[illegible]	6,1	7,5		83	67	64		30,036	[illegible]	[illegible]	9,7	9,0		84	60	66		6[illegible],3	72,6		s.	se.	haze.	cum.
18	,123	[illegible]	[illegible]	4,1	3,0		89	80	76		29,988	[illegible]	[illegible]	9,2	10,3		80	56	59		72,6	73,3		S. W.	se.	cumuh.	fine.
19	,052	[illegible]	[illegible]	2,3	4,7		91	87	80		,947	[illegible]	[illegible]	9,7	7,2		82	62	63					nw.	n.	do	clear.
20	,075	[illegible]	[illegible]	4,3			89	80	76		,964	[illegible]	[illegible]	9,8	12,0		75	50	50					N.	N.	clear.	do
21	,136	[illegible]	[illegible]	9,4	10,0		76	52	52		30,026	[illegible]	[illegible]	9,9	14,0		70	39	44		75,6	76,6		n.	nnw.	do	do
22	,148	[illegible]	[illegible]	14,3	14,6		67	33	40		,022	[illegible]	[illegible]	9,0	18,5		59	22	30		73,3	72,4		nw.	N. W.	cir cum.	do
23	,094	[illegible]	[illegible]	13,8	15,0		69	33	42		29,938	[illegible]	[illegible]	9,0	21,0		56	17	27		72,4			NNW.	N. E.	clear.	do
24	,038	[illegible]	[illegible]	2,7			68	42	41		,929	[illegible]	[illegible]	8,7	24,8		56	17	27					o.	w.	do	do
25	29,931	29,[illegible]	[illegible]	5,6	6,5		86	72	70		,811	[illegible]	[illegible]	9,6	18,0		66	34	38					S.	S. W.	do	fresh wind.
26	,893	[illegible]	[illegible]	13,1	15,5	50,0	69	42	42	40	,778	[illegible]	[illegible]	9,8	21,5	50	55	24	26	28				nw.	W.	do	do
27	,921	[illegible]	[illegible]	2,4	13,7	54,5	74	45	49	44	,803	[illegible]	[illegible]	9,0	19,6		68	30	41		75,5	74,5		n.	S. W.	do	fine.
28	,970	[illegible]	[illegible]	6,1	8,2		85	68	68		,862	[illegible]	[illegible]	9,9	19,3		67	35	40		78,0	76,0		w.	o.	do	do
Mean.	30,032	30,0[illegible]	[illegible]	7,2	7,3		82	64	63		29,919	29,873	81,9	14,3	14,6		69,1	41	43		71,5	73,0	1,00				

The barometrical differences at 10 and 4 are .022 and 046. In January they were .024 and .058. From the 20th the old hygrometer, supplied with new hair and properly verified in its scale, is registered.

Specimen of the Ahom, or Assam, Character.

from a manuscript volume presented to the Society by Capt. Jenkins 1835

Ahom Alphabet prefixed to the same volume

The first line in roman letters

AUM? pin-nga-yi-meuu-ran kö-tau pha pai mí nin : paimí leup

JOURNAL

OF

THE ASIATIC SOCIETY.

No. 63.—*March*, 1837.

I.—*Remarks on* M. SCHLEGEL's *objections to the restored editions of the Alif Leilah, or Arabian Nights' Entertainments. By* HENRY TORRENS, *Esq. B. A. and of the Inner Temple, B. C. S.*

At the time of the purchase of the Macan MS. by Mr. BROWNLOW, several of the most distinguished Arabic scholars in this part of India registered in this journal their opinion of its value. The style of the language was declared to be singularly pure, the narrative spirited and graphic, and the collection of stories enriched with many tales either perfectly new to European readers, or else given in a form very different from that under which they have been hitherto known, garbled and abridged by the carelessness of translators, or by imperfection of the MSS. whence they were translated. Since the publication of the opinions above alluded to, a letter addressed by Mons. DE SCHLEGEL to Mons. le Baron DE SACY, upon the subject of the thousand and one nights, has excited some attention in *Calcutta*, with reference especially to the supposed excellence of the Macan MS. Mons. DE SCHLEGEL has asserted of these celebrated tales generally, that many, if not most of them, are plagiarized from a Sanscrit original, and that others are "intercalated" stories, taking their rise in neither India nor Arabia. Hence he concludes that the greater the number of tales, the more frequent the plagiaries and intercalations; and such being the case, "we may be assured," he says, "that the most voluminous edition of the thousand and one nights will be the worst." Without stopping to weigh the soundness of this line of argument, based on a *petitio principii*, and inducing a most inconclusive conclusion, it is worth while (the attack being so sweeping) to assume the validity of this reasoning, and prove the

strength of Mons. DE SCHLEGEL's position by examining the instances with which he supports it. If his conclusion be a true one, then the Macan MS. must be the worst instead of the best form of the thousand and one nights hitherto discovered, for it is "the most voluminous:" the first five nights in this MS. for instance, contain the matter of the first seventeen nights of GALLAND's edition, and an additional tale, entirely new, besides. In deference to so celebrated a literatist as Mons. SCHLEGEL, it is proper to consider what he advances attentively, and, keeping strictly to the letter of his arguments, to refute them, if possible, by their own assertions. It will not be perhaps difficult to show that the critic's reasons for the adoption of the above opinion are remarkable rather for ingenuity than soundness, or to prove by demonstration that the new tales of a "most voluminous" edition may bear not only the stamp of originality, but also strong internal evidence that they are indigenous to *Arabia*.

Mons. DESCHLEGEL supposes that the tales of the thousand and one nights could never have been popular with Mussulmans, owing to the multitude of supernatural beings of different kinds crowded into them, there being, he says, "scarcely another step hence to the doctrine of polytheism." In expressing this opinion, Mons. DE S. has entirely forgotten the extreme superstition of the followers of the Prophet with respect to the existence of *jinns*, (both believers and accursed,) *ghols*, *ufreets*, and many other classes of imaginary beings, each distinguished by some peculiarity of character and habits. These are introduced in multitudes in the tales in accordance with the ordinary Arab superstitions which obtain most credit with the most bigoted Mussulmans. They are introduced with most liberality in some of the tales abounding especially in the expressions of religious feeling, and the believing spirits invariably make use of the ordinary devotional phrases so constantly in the mouth of an Arab. They are introduced not on the *dignus vindice nodus* principle as what Mons. DE S. calls "semi-deities;" they take part in the action of the story, and from their stupidity are the butts of the superior intelligence of men. So far from showing marks of transmutation to an Arab shape from a heathen original, they appear to be themselves the surest proofs of the Arabian extraction of the stories they figure in. Mons. DE S.'s determination to prove the Indian origin of many of the tales has led him to the singular supposition that a people whose manners they faithfully depict, and whose superstitions they embody, that a people whose very language bears testimony to their passion for fiction, (the same word being employed in Arabic

to express *conversation* and *the relation of stories*) would neglect such tales even though indigenous to their fatherland because the excess of supernatural agency in them savoured of "polytheism!"

With reference, however, to the objection by Mons. De S. on the point of plagiarised tales, and his attempt to prove the plagiary by anachronisms, an expression in the story of the fisherman and the jinn in the Macan MS. may be cited, not inopportunely, as giving some index to the date at which it was originally composed. The jinn is described as having been shut in a jar for "*one thousand and eight hundred years*" from the time of Solomon, the son of David. Now this tale with one of Mons. De S.'s "*semi-deities*" in it, whom he supposes importations into *Arabia* from an idolatrous source, and abominations in the eyes of orthodox Mussulmans, was by the above account composed during the third century of the Hejira, at the very height of Mussulman orthodoxy.

Arguing on the supposition of the transmutation of most of the tales from heathen originals, Mons. De S. proceeds to point out how the Koran might have been introduced instead of the Vedas, and the name of Haroun ul Rasheed made to supersede that of Vicramaditya; and with reference to the introduction of that Khalif's name, he cites the expression in the commencement of the thousand and one nights, "the chronicles of the Sassanians" as constituting a palpable anachronism. Now the expression quoted does not exist in the Macan MS: the words are *a king among kings descended from the dynasty of Sassan*; and the mention of Islamism among descendants from Sassanian princes does not appear to be in any way anachronous. Again, Mons. De S. has ingeniously discovered in the four colors of the fish, (vide the tale of the fisherman) who in their natural shape were a population of Christians, Jews, Mussulmans, and Idolaters, a type of the four castes of the Hindoos; for, says he, "the metamorphosis in the original was brought about by a jeu de mots; *varna* in the Sanscrit signifying *colour* as well as *caste*." This will hardly hold good when we look to the Arabic wherein special mention is made of the different *religions* of the men transmuted into fish of different colors. Now the Hindus have, it is true, four principal castes, but their *religion* is a common one. Another instance on which much stress is laid by Mons. De S. of the internal evidence of an Indian extraction offered by the tales is cited from the tale of the king and the physician. The position is this. 1. The king is poisoned by a MS. 2. Some Indian MS. are saturated with a solution of orpiment to protect them from insects. 3. No other MSS. are

so saturated. 4. This was, therefore, an Indian MS. thus prepared. 5. This was, therefore, an Indian king. 6. This was, therefore, an Indian story. The answer to this somewhat illogical sorties is—1. That an Indian king turning over an Indian MS. would not, as did the king in the story, have exposed himself to the chance of being poisoned. 2. That the supposition of the MS. being an ordinary Indian MS. would utterly take away the moral of the tale. 3. That (as the tale tells us) the supposed MS. was no MS. at all, for "the king turned over six leaves, and looked upon them, *and found nothing written upon them*," which induces a further search into the book, and a more certain death in consequence. But perhaps a literal translation of the latter part of the story from the Arabic of the Macan MS. will best show the futility of Mons. DE S.'s argument, the moral of the tale being the retribution inflicted by the victim on the oppressor by means of the knowledge he is in the commencement said to possess of "all modes of healing, *and of hurting*."

Extract from the Story of the Physician and the King.

"And after this the executioner stepped forward, and rolled his eyes fiercely, and drew his sword, and said, 'Give the word;' and the physician wept, and said to the king, 'Spare me, spare me, for the love of God, and kill me not, or God will kill thee,' and commenced extemporaneously reciting,

'If I live no man I'll profit; if I perish curse for me
All the good, when I'm no more, with every curse of infamy.
I was kindly; others cruel; they were prosperous; I lost all;
And benevolence hath made me master of a ruined hall*.'

Then said the physician to the king, 'This is the return I meet from you; you return me the reward of the crocodile.' Then said the king, 'And what is the tale of the crocodile?' The physician replied, 'It is not possible for me to tell it, and I in this state; and as God is with you, spare me as God will spare you.' So then the physician wept with exceeding weeping, and certain of the king's private attendants arose, and said, 'Oh! king, grant us the life of this physician, for we have not seen him commit one fault towards you, and we have not seen him save as healing you from your disease, which baffled all physicians and men of science.' Then said the king to them, 'You know not the cause of my putting to death this physician and this it is, that if I spare him, surely I myself am doomed

اذا عشت لم انصحْ وإن متُّ فالعذو*
ذوى البضع من بعدي بكل لسان
نصحتُ فلم افلح وخانوا فافلحوا
واورثني نصحي لدارٍ هوان

to death without a doubt, for by healing me of the disease which I had by something held in the hand, surely it is possible he may slay me with something given me to smell; hence I fear lest he kill me, and take a bribe for doing it; since he is a spy, and has come hither for no end but to compass my death; so there is no help for it,—die he must, and after that I shall be assured of my own life.' Then said the physician, 'Spare me, spare me, for the love of God, and kill me not, or God will kill you.' Now when the physician, Oh ufreet, knew for certain that the king would put him to death without a doubt, he said to him, 'Oh king, if there is no help for it, but that I must die, then grant me a space that I may go down to my house, and appoint my people and my kindred where they may bury me, and that I may relieve my soul from its obligations, and distribute my books of medicine. And I have a book, rarest of the rare; I offer it to you as an offering; keep it as treasure in your treasury.' Then said the king to the physician, 'What is in this book?' He replied, 'Things countless beyond the power of computation; and as a small portion of the secrets that are in it, if you directly after you cut off my head open three leaves of it, and read three lines of the page on your left hand, then the head will speak with you, and give you answers to every question which you ask it.' So the king wondered with exceeding wonder and shrugged with satisfaction and said, 'Oh physician, what! directly I cut off your head will you speak to me?' He answered, 'Even so, O king.' So replied the king, 'This is a strange matter,' and forthwith sent him away closely surrounded by a guard; and the physician went down to his house, and performed all his obligations on that day, and on the next day he went up to the king's hall of audience; and the umeers and ministers and chamberlains and deputies in office and the supporters of the state went up also, the whole of them, and the presence chamber was as a flower bed of the garden: and lo! the physician came up into the presence chamber and stood before the king surrounded by guards, and with him he had an old volume, and a bottle for holding antimony, and in it a powder: and he sat down and said, 'Give me a charger,' and they gave him a charger; and he poured the powder upon it, and spread it out, and said, 'Oh king, take this book and open it not until you have cut off my head, and immediately you have cut it off, place it on this charger, and order its being thrown upon that powder, and directly you have done that, the blood will stop flowing; then open the book.' So the king gave orders for the cutting off the physician's head and took the book; and the executioner arose, and struck the physician's neck with the sword, and placed the head in the middle of the charger, and threw it upon the powder, then the blood stopped flowing, and the physician Dooban opened his eyes, and said, 'Open the book, O king;' so the king opened the book, and found the leaves stuck together, so he put his finger to his mouth, and moistened it with his tongue and opened the first leaf, and the second, and the third, and each leaf did not open but with much trouble; so the king turned over six leaves and looked upon them, and found nothing written upon them.

Then said the king, 'O physician, there is nothing written upon these;' and the physician replied, 'Turn over more still;' so he turned over three more, and there had but a short space elapsed before the drugs penetrated his system at one time and on the instant, for the book was poisoned, and forthwith the king began to be convulsed, and cried out, and said, 'The poison has penetrated me,' and the head of the physician Dooban began to repeat extemporaneously,

'They issued savage mandates, but not long
Survived they in their cruelty, for lo!
'Twas but a little, and the mandate was not.
Had they done justice, justice were done them—
But they did ill, and evil was their portion;
And fortune turned against them, strongly armed
With acts of woe and trouble. Thus they passed hence,
And the mute eloquence of their condition
Repeated to them, "This is your reward.—
Blame not the retribution!"'

(So goes the tale); so when the physician's head finished its speech, the king fell down on the instant a dead corpse."

The above extract will give some idea of the literal style of a tale so popular under GALLAND'S paraphrase, but expressed in the Macan MS. (as will be observed on comparison) much more in detail, and more graphically.

There remains now but to allude to Mons DE SCHLEGEL'S remaining assertion, that the more voluminous the edition of the thousand and one nights the worse will it be. The best reply to this will be the citation of a new tale forming part of the recital of the fourth night in the Macan MS. It offers a fair occasion for the formation of a judgment on Mons. DE S.'s sweeping assertion, for it has never been found save in this voluminous edition, and is now translated of course for the first time.

The Story of the King Sundabad.

"It is said that there was a king among the kings of Fars, who was fond of sport, and of exercise, and of hunting, and of trapping game, and he had always a certain hawk near him, which he let not be separated from him by night nor by day; and all night long he had it sitting on his hand, and whenever he rose up to hunt he took the bird with him. And he made for it a cup of gold hung round its neck, to give it to drink out of. Now it fell out as the king was sitting, behold the chief falconer began to say, 'Oh! king of the age, these are the days for going forth to hunt.' Then the king ordered that they should set forth, and took the hawk on his hand; and they journeyed till they arrived at an open plain, and they

struck out the circle for the battu, and forthwith a doe antelope came within the circle. Then said the king, 'Over whose head the antelope shall leap and get away, that man will I kill.' Then they narrowed the circle of the battu about it, and, behold, the antelope came before the king's station and stood firm on its hind legs, and gathered in its fore feet to its breast, as if about to kiss the earth before the king; so the king bowed his head in acknowledgment to the antelope; then it bounded over his head, and took the way of the desert. Now it happened that the king saw his attendants winking and pointing at him, so he said, 'Ho! vuzeer, what are my attendants saying?' The vuzeer replied, 'They say you proclaimed that over the head of whomsoever the antelope should leap, that man shall be put to death.' Then said the king, 'By the life of my head, surely I will follow her up till I reach her;' so the king set forth in pursuit of the antelope, and gave not over following her till she reached a hill among the mountains. Then the antelope made as she would cross a ravine, so the king cast off his hawk at her; and the bird drove its talons into her eyes, to blind and bewilder her, and the king threw his mace at her and struck her so as to roll her over. Then he dismounted, and cut her throat and flayed her, and hung the carcass to the pummel of his saddle. Now it was the time for the mid-day sleep, and the plain was parched and dry, nor was water to be met with in it; and the king was thirsty, and his horse also; so he went about searching for water, and he saw a tree dropping water, as it were clarified butter. Now the king wore gloves of the hide of a beast of prey, and he took the cup from the hawk's neck, and filled it with that water, and set down the water before the bird, and lo! the hawk struck the cup with its talons, and overturned it. So the king took the cup a second time, and caught the drops of water as they were falling until he filled it, for he thought the hawk was thirsty; so he set the cup before it, but she struck it with her talons and upset it. Then the king was annoyed with the hawk, and got up a third time, and filled the cup, and put it before his horse, but the hawk overturned it with its wings; then said the king, 'The Lord take you, you unluckiest of birds! you keep me from drinking, and keep yourself from drinking, and keep the horse from drinking!" So he struck the hawk with his sword, and cut off its wing, but the hawk began lifting up its head, and saying by signs, 'Look at what is beneath the tree.' Then the king lifted up his eyes, and saw below the tree a young snake, a poisonous one, and this which was dropping from the tree was its poison. Then the king repented him of having cut off the hawk's wing, and arose and mounted his horse and went, taking with him the antelope's carcass until he arrived at his tent within the hour, and he gave the antelope to the cook, and said to him, 'Take, and make this ready.' So the king sat down in his chair, and the hawk on his hand, and the bird struggled gaspingly, and died. Then the king cried out, wailing and lamenting for having slain the hawk, and it was the cause of saving him from death! And this is what occurred in the story of the king *Sundabad*."

The above short tale is valuable as answering more than one of Mons. DE S.'s arguments. It contains instances of the same power of description and habit of close observation which form the principal charm of the known tales. Any one who has been in the custom of watching the antelope, or observing the natural motions of the hawk, will recognise the action of the one and the other faithfully described in the attitudes common to them when scared or excited. The mention too of *hawking the antelope* proves the story to be purely Arabian: no other nation but the Arab using the hawk against large animals. The Persian hawks the hare, but only the Arab flies his bird at the antelope. Thus then, so far from the additions to the "most voluminous" edition being the cause of its deterioration, as unnaturally adapted from foreign sources to Arab manners, the very first of those additions is found to be a spirited tale describing graphically and naturally the progress of passion, (excited originally by a trifle, and ending in the blind commission of an act of ingratitude) and giving indisputable evidence of an Arab origin.

The judgment of those infinitely better qualified than myself to pronounce on the merits of the Macan MS. is, it is submitted, fully supported by the result of this brief inquiry. The translation having been made literally from the Arabic, this will account for a singularity of expression which may be displeasing to most readers. In undertaking to introduce the new tales to the English reader, I would be glad to avail myself of opinions upon the expediency of holding to this style of translation, or adopting one more consonant with European idioms.

[NOTE.—As far as we may be allowed to be capable of judging on such a point, we think our correspondent's style of expression is particularly felicitous and suitable to the work, of which we are happy to see this public acknowledgment of his having undertaken the translation.

We had rather that the stories should retain the terseness, the simplicity, the very turns of expression as well as of idea so peculiar to the language as to the literature of Arabia, than that they should be dressed up in the uncongenial disguise of modern idiom however elegant. There is at the same time nothing, in the style adopted, repugnant to our ears, already familiar from childhood with the oriental phraseology of the translated scriptures:—but, on the contrary, the total foreignness and antiquity of the incidents and reflections, and the admixture of the supernatural, now discarded from our own works of fiction, seem to acquire support and harmony from a corresponding style of diction. We need only refer the reader to the parallel passages quoted in the Minute on the Macan MS. by Dr. MILL (vol. V. page 598) to prove the great superiority of tone and keeping, as an artist would say, in the strict dry nervous copy of the original, as contrasted with the smoothened, mannerized, and totally Frenchified, though in many respects pleasing, picture of M. TREBUTIEN.—ED.]

II.—*Journal of Captain* C. M. WADE's *voyage from Lodiana to Mithankot by the river Satlaj, on his Mission to Lahór and Bahâwulpur in* 1832-33. *By Lieut.* F. MACKESON, *14th Regt. N. I.*

On the 8th December, after some days spent in constructing temporary locks on the *nala*, and here and there widening and deepening its channel, the boats arrived at its mouth and entered the river *Satlaj* about a mile above the village of *Wallipura*.

Our fleet consisted of eight boats, three built by Captain WADE at *Lodiana* for the accommodation of the mission, after the model of those used on the river *Ravi*; one of a similar construction, the property of *Lodiana* merchants, also built at *Lodiana*; two common *Satlaj* ferry boats, belonging to *Lodiana* baniahs; and two small boats with oars, for the convenience of communicating with the shore and taking the bearings of the reaches of the river.

The *Ravi* boats are flat-bottomed, and nearly square fore and aft, with the prow and stern slightly raised: those built at *Lodiana* varied in length from fifty to fifty-five feet, and in breadth from eleven to twelve feet, having a depth of two and a half to two and three quarters feet. They drew, when not laden, from ten to fifteen inches water, and going down the stream in the actual state of the river were capable of carrying from two hundred and fifty to three hundred maunds.

The ferry boats in use in this part of the *Satlaj* are not much better than rafts, from which they differ little in appearance. They are very broad at the stern, and terminate in a point at the prow, which is carried up high into the air. Although calculated for no other purpose, they are well adapted to the transport of hackeries and cattle across the river; the side planks being low, laden hackeries are easily lifted over them into the boats; or the ground at the ghât is raised to a level with them, and the time lost in embarkation and disembarkation is comparatively trifling. Accidents to cattle can seldom occur, as they are able to step into the boats without difficulty, and no space being lost in cross beams or partitions, a great number can be accommodated at a time.

Wallipura is a small village, containing from thirty to forty mud hovels: it belongs to Sirdar FATTEH SINGH ALAWALLA. We remained there on the 9th in expectation of the arrival of a party of Mahá-rája RANJI'T SINGH's irregular horse, which was to escort the boats along the left bank of the river.

The breadth of the river at this point, where not intersected by sand banks, measured two hundred and fifty yards. The deep channel

under the left banks gave from fourteen to fifteen feet water, which decreased to seven and six feet within twenty yards of the shore, beyond which it was extremely shallow.

From *Ropur*, where the *Satlaj* enters the plains to where it is joined by the *Lodiana nala*, it may be said to have run a course of near fifty miles. At *Ropur* its bed consists of large smooth pebbles mixed with a slimy mud; after leaving that place it runs over a loose sandy soil through a flat country, and during this part of its course the present left bank is generally low. There is a high bank passing close under *Chamkaur*, *Balolpur*, *Máchiwára kum*, and *Lodiana*, which points out the old channel. This is now pretty nearly the course of the small *nala*, which rises in the marshy ground between *Ropur* and *Chamkaur*, and enters the *Satlaj* a little above *Wallipura*. The slip of land between it and the present channel of the *Satlaj* varies in breadth from eight to two miles and less: it is low and much intersected with *nalas*, most of which are without water during the greater part of the year; but their beds and banks retain a degree of moisture when the rest of the country is parched and dried up, and afford an abundant supply of grass of a good quality within a convenient distance from the cantonment of the troops.

The right bank from *Ropur* downwards is generally high and the face of the country elevated, sloping gradually from the hills, which recede northwards, towards the river, near which it is much broken and cut up by ravines. On both sides the country is tolerably open and free from heavy jungle, but on the right sparingly cultivated. Water is found much nearer the surface on the left than on the right bank, and cultivation is more uniform. There is a tract of grass jungle on both sides of the river near *Chamkaur:* it forms excellent pasture for buffaloes which are numerous and particularly large. Wild hogs are sometimes found in this vicinity: they come from the hills on the opposite side, and swim the river at night to feed on the sugar-cane.

The tamarisk jungle is seen in small quantities near the river at *Talore*, and even higher up, but never grows to any considerable height, and is thin and straggling: the soil left by the overflowing of the river in which it chiefly grows, does not appear to have acquired that richness which it is said to possess at a greater distance from the river's source.

During the cold weather when at its lowest, the *Satlaj* is fordable in many places between *Ropur* and *Lodiana*, and even to its junction with the *Béas;* but it can no where be forded in a direct line; it is necessary to follow the shoals or sand banks, which make the passage

circuitous and tedious; and owing to the numerous quicksands, it must always be considered an affair of danger for bodies of troops to attempt. As the sands are constantly shifting, the fords also are liable to change.

I am not aware of the exact number of boats between *Ropur* and *Lodiana*. The principal ghâts or ferries are those opposite to *Ráhon*, *Máchiwára* and *Fabor*; the two first lie in the route from *Jágadri* on the *Jumna* to *Amritsir*, and a considerable traffic passes by them. There may be sixteen boats at *Ráhon* and eight at *Máchiwára*. The ghât at *Fabor* has upwards of fourteen, and is also much frequented, lying in the direct route from *Ambála* through *Lodiana* to *Amritsir* or *Lahór*. There is also a ghât at *Kirána*, which may have eight boats, and another near *Ropur* which has four. Besides the boats at the ghâts there are a few scattered here and there at the different villages on the banks of the river belonging to the zemindars, and used by them for the convenience of crossing to and fro, and transporting grain and firewood.

On the morning of the 10th we left *Wallipura*. The river was swollen and muddy from rain, which had fallen higher up during the two previous days, and which somewhat increased the rapidity of the current. As near as I could judge from the rate at which people were walking on the bank, it must have averaged near three miles in the hour. Our boats kept chiefly in the shallow water for the convenience of using the pole to push them along; they are furnished with oars, but the *Satlaj* and *Raví* boatmen seem to be unaccustomed to their use; and the oars are so very clumsy and unwieldy, that they would require at least four persons to each to serve them with effect.

Leaving *Wallipura* the deep channel runs under the left bank for upwards of a mile, when the river separates into three branches; the main one, which we followed, running under the right bank to *Dhádhára*, near which the three branches again unite and form an uninterrupted channel 400 yards broad. On our left we passed the ghât of *Talwandi*, where there were ten boats similar to those already described. Judging from the number of people we saw crossing, it must be a considerable thoroughfare; a small traffic passes by this route from *Jhajraon* and the *Múlk Rokie* to *Doab bist Jalimdar*.

After passing *Talwandi* the deep channel again crosses over to the left bank, and on approaching near to *Bhundri*, makes a long sweep in towards the left, running close under that village.

The country on our left to-day was low and uncultivated, subject to inundation, and consisted chiefly of pasture land; that on our

right appeared high. There were fields of stubble and patches covered with the cotton plant. We passed one inlet from the river on the right, and a *jharí* jungle extending a short distance on the bank, but low and thin. We stopped at *Bhundri*, estimated distance from *Wallipura* four kos. This village, like the rest which we passed today, is hardly deserving of remark: it contains a small *paka* mosque, which is in much danger of being destroyed by the river. The dwelling houses, of which there may be 100, are all of mud, either thatched or with *kacha* terraced roofs. It has two *baniahs'* shops. The inhabitants are chiefly Mussalman zemindars. *Bhundri* and *Khánpur*, *Wazir ke Gaur*, villages in the neighbourhood, are inhabited by a caste of Putial Rajpúts, who claim descent from Rájas HOSPÁL and JAGPÁL. Their ancestors were converted to Islamism some five centuries ago by HAZRAT SHÁH KATÁL CHISHTI, one of the descendants of HAZRAT SHEIKH FARID, the famous saint of *Pák Patan*. His relics are deposited somewhere between the villages of *Talwárá* and *Sheikh Chishti* under the shade of a grove of *bábul* trees: there is his *khángáh* or shrine, which the surrounding inhabitants visit in great crowds on certain days of the year to pay him the honors due to a saint.

The Patiáls retain many of their Hindu customs, especially the ceremonials at births and marriages, in which the Brahmin priest often assists and claims the usual fees.

They intermarry only among themselves, it being thought a disgrace to give their daughters in marriage to a person of different caste or descent.

The Jats, Gujars, Harnis, Arráins, who chiefly compose the peasantry of the country from above *Lodiana* down to *Firozpur*, all claim descent more or less remote from a Rajpút stock. They are generally ill-looking, tall and thin, but with large bones and sinewy limbs. The usual dress of the better sort is a blue-colored *dhóti*, tied somewhat differently from the common mode, reaching down nearly to the ankles, and seeming to embarrass their motions in walking. With this they wear a large cotton *chadder* or sheet, which is either flung in double folds over the shoulder and across the breast, or used to cover the whole body; it is exchanged for a blanket in the cold weather. The turban is of cotton, either plain or dyed blue, and tied sometimes Sikh fashion in a high *topí*, and sometimes in loose folds, leaving great part of the head uncovered. The coarse cotton cloth which forms their ordinary wear is a home manufacture. The poorer among them are little troubled with clothing of any description.

Their women share in the labour of the field, and perform all the menial and laborious offices about the house. They fetch water from the wells, prepare the cakes of cow-dung (*opla*) for fuel, and cleanse and plaister their mud hovels and *chabútras*, while the husbands are smoking their pipes, or employed in making rope of the *múnjh* grass and repairing their implements of husbandry. Disputes among them are referred to a *panch* or council of the Chaudries (elders of the village), or to arbitrators chosen by the parties. The men are addicted to the use of *bhang*: are turbulent, quarrelsome, revengeful, and careless of the shedding of blood. Their prevailing vice is petty thieving. Female infanticide is practised, but is not very common among these tribes.

After the decline of the *Dehli* empire, the whole tract of country from *Ropur* down to *Mamdot* on the left bank of the *Satlaj*, fell a prey to RAI AHMAD MUNJ, one of the numerous adventurers who rose to a temporary consequence in those days. When RANJI'T SINGH crossed the *Satlaj* in 1808, and took *Jagrion*, the portion of this extensive territory which still remained in the possession of RAI AHMAD's family was subjected to that conqueror, and *Jagrion* and its dependencies were bestowed by him in *jaghir* on Sirdar FATTEH SINGH ALAWALLA, under whose rule they still continue. His territory joins that of the *Jhind* rája near *Lodiana*, and reaches with few interruptions to within a short distance of *Firozpur*. It is ill cultivated and almost destitute of wood, which is no where used for fuel by the villagers. *Jagrion*, the *Dár-ul amal*, is about 10 miles inland from *Bhundri*.

On the 11th we left *Bhundri*. For two miles beyond this place the left bank of the river is excessively high; the deep channel runs rapidly under it, undermining large fragments of the soil, which continued falling as we passed, and raised large waves on the river. After passing the villages of *Khát* and *Gursian*, the deep channel crosses over to the right bank, leaving the villages of *Talwára* and *Sheikh Chishti* far away to the left, at the extremity of a wide tract of sand. Further on, at the same distance from us, we passed *Bhamál* and *Sálampur*, when the river again doubled round a point, and the deep channel brought us under the village of *Sidhuan* on the left bank.

To-day the river was devious and winding in its course, much intersected with sand-banks, which from a distance appeared to stretch quite across the channel and threaten a serious obstacle to further progress. The shoals were numerous, appearing to cross each other

in all directions; insomuch, that it required great care and attention to steer clear of them. None but an experienced eye could distinguish from a long distance what the boatmen call "*kacha*" from "*paka-jal*." A villager who accompanied us from *Bhundri* pointed to a number of temporary huts on the left bank near that place, the inhabitants of which had, in his memory, removed no less than three times from one bank to the other, in consequence of the river changing its course and undermining its banks. Abounding as it does with shoals and sand-banks, and running over a loose soil through a flat country, this frequent change in its channel is the less surprising: it generally occurs after the rains, when its waters are swollen and impregnated with earthy particles. The prevalence for a length of time of a particular wind occasions the choaking up of the old channel, which the waters leave on subsiding, to pursue a new direction.

The country to-day differed little in its features from that we had passed the day before. At this season there are no crops standing, and, save in the vicinity of villages where a few garden vegetables give an appearance of verdure, the whole has an unvaried arid aspect. Trees are only seen near the villages, and those generally of the common *bér*, with here and there a *pipal*. The *jhán* is met with only in small patches, low and straggling. There was a great improvement observable in the soil of the banks of the river, especially that of the right bank, which exhibited strata of a rich red clay with mould of a darker color beneath. During the first part of our course after leaving *Bhundri*, the current was rapid, running under the high bank at the rate of four miles an hour; as we approached the end of our journey it became sluggish, scarcely averaging a mile and a half. We had a depth in some places of eighteen and twenty feet, and in others not more than four: in the deepest part this occurred where there were many channels, and we might not have been in the deepest, although we always chose those which in appearance promised to have the greatest body of water.

In passing *Sidhuan* I observed immense flocks of wild geese feeding on the sand-banks, and close to them an alligator, the first I have seen on the river, though they are said to have been found as high up as *Ropur*, and small ones are sometimes caught in the *nala* near *Lodiana*. Perhaps the coldness of the weather may account for my not having hitherto seen them in greater numbers. There appear to be few wild ducks or teal. The *jal kawá*, which we call the black diver, is common.

We came to about a mile beyond *Sidhuan*; estimated distance from *Bhundri* eight kos.

There is a ghât at *Sidhuan*. It is in the road to *Ropur*, in the *Doab bist Jalimdar*, and has ten boats, but the traffic by this route is inconsiderable. The duties are levied by the officers of Mahá-rája RANJI'T SINGH and Sirdar FATTEH SINGH ALAWALLA, on either side respectively. The village of *Sidhuan* is large, but has no bazar; contains from two hundred to two hundred and fifty mud and *paka* dwelling houses; with three *baniahs'* shops or *hattis* which supplied our people with food.

On the 12th we left *Sidhuan*. The channel continued under the left bank for upwards of two miles, when it passed the village of *Shaffipura*, and, crossing over to the right with considerable winding, brought us in the fourth reach nearly opposite to *Tihara*; there dividing into two branches, the smaller one ran directly under that town, while the larger struck off to the right towards *Kannian* and *Bhaggian*.

Tihara is the site of extensive ruins, which shew that it was once a place of some consequence; native authorities mention its being inhabited so long ago as the time of the Persian SECANDER SHÁH'S expedition. The ruins now standing are of more modern date. It has suffered great damages from the inroads of the river. The present dwelling houses of the inhabitants are of mud, and mingle disagreeably with the half dilapidated but substantial brick walls of its former buildings. In the time of the *Dehli* emperors, it was attached to the Suba of *Lahór*. It was taken from the descendants of RAI AHMAD MUNJ (after they had been driven from *Mamdot* by the Pathán family of KUSUR) by RANJI'T SINGH, and given by him in *jaghir* to FATTEH SINGH ALAWALLA. The soil in the vicinity is good, and there are a number of fine *paka* wells, but little cultivation. The zemindars are *Arráins*, more commonly called *Mollies*, to the eastward; a class who seldom engage in cultivation on a large scale.

About six miles beyond *Tihara* is the village of *Tariwála*, opposite to which the right branch of the river again divides, the main stream making an immense circuit to the north-west, and leaving an island of three or four miles in breadth between it and the left channel which ran under *Tihara*. Night overtook us before we arrived at the junction of the three branches, and we were obliged to stop opposite to a village on the right bank called *Ramé-ke*. We were separated from our land party, and *Ramé-ke* could furnish no provision for our boatmen and camp-followers. From *Sidhuan* to *Ramé-ke* fourteen kos.

On the following morning, the 13th, we continued our journey, having previously sent on one of the boats at an early hour to purchase provi-ions. At *Talwandi* we came up with our advanced party; they had been able, with much difficulty, to procure a rupee's worth of *árad* from that village. There is a ferry, but I saw only one boat. After leaving *Talwandi* the river makes a very sudden turn to the right, round a point which we had much difficulty in weathering; and when this was accomplished, our boats drifted to the opposite shore and grounded on the sand-banks. A mile or more beyond this the three branches unite, and from the point of their junction to the ghât of *Miáne* and *Rerú* the river runs in a straight uninterrupted channel, confined by moderately high banks, and presenting in front, as far as the eye could reach, an unbroken surface of water. It is here a fine stream passing by *Puniún* where the river is again broken by shoals and sand-banks. The next reach brought us near *Fattehpur*, from whence, leaving *Jhániún* on the left, the deep channel crosses over to the right bank, and in the next sweep to the left under *Mahárúj-wála*.

The banks to-day were studded with villages at a di-tance of a kos, more or less, from the river. Those in the district of *Dharamkot* belong to Mahá-rája RANJI'T SINGH, who has a small detachment of cavalry there and a fort; those in the *Fattehgarh* district are held by SHER SINGH BANDEICH, a thanadar under the Mahá-rája, and the rest by Sirdar FATTEH SINGH ALAWALLA. In some the authority is divided, half the village belonging to the *khalsa* and half to the *jághirdár*. They are all small and thinly inhabited.

We stopped at *Mahárúj-wála*; estimated distance from *Ramé-ke* ten kos by the river.

This village is in the *Fattehgarh* district, now held by SHER SINGH BUNDEICH as thanadar. The lands are *khálisa* (or rent-free). *Fattehgarh* and the neighbouring country formerly belonged to TARA SINGH GHAIBA of *Kang* on the other side. Like most of the Sikh Sirdars, this person rose from an obscure origin to sudden, but, in his case, temporary power. He was originally a common shepherd, and acquired the name of "*Ghaiba*" (or wonderful) in his boyhood, from the circumstance of his having constructed a rude bridge of rope over the river *Weh*, which falls into the *Satlaj* below *Andrísa*, and across which he was in the habit of driving his sheep to graze on the opposite bank where the pasture was of a better quality. He joined the camp of the *Lahór* chief, who was just then entering on his career of conquest, as a needy soldier, and after serving a campaign returned laden with spoil which he disposed of in collecting a few followers. With these

he commenced a system of depredations on the country. Many needy adventurers flocked to him, till by degrees he found himself at the head of a formidable band; he then raised the standard of independence, proclaimed himself a Sirdar or chief, and commenced adding to his small patrimony by preying upon the weaker of his neighbors. Village after village submitted to his rule, till, by fraud and force, he became master of a large tract of country on both sides of the river. He had scarcely time, however, to enjoy his good fortune, when the extent of his territory attracted the notice of the *Lahór* chief, who did not long want a pretext to dispossess him. The whole of his ill acquired possessions fell into the hands of the Mahá-rája, by whom *Fattehgarh* was confirmed in *jághir* to HARI SINGH, the same person who had held it under TÁRÁ SINGH GHAIBA. At a subsequent period HARRI SINGH became disaffected toward the *Lahór* chief, and in 1825-26 was one among the Sirdars who openly threw off their allegiance to him, and, in virtue of their possessions on the left bank of the *Satlaj*, claimed the protection of the British Government, whom they wished to acknowledge as lord paramount. The others were Sirdar FATTEH SINGH ALAWALLA, Sirdar CHET SINGH of *Kot Kapura*, and QUTUB-U'-DIN KHA'N KASARIA, the Pathán chief, whose family are now in possession of *Mamdot*. It was not thought expedient to comply with their wishes, and they were directed to return to their allegiance to the Khálsa Ji. Sirdar HARI SINGH dying soon after, the territory of *Fattehgarh* was taken possession of by the *Lahór* chief, and has since continued to be *khálsa* land.

On the 14th we left *Mahárаj-wála*. The river pursues a very winding course from this place till it passes between *Mundhiála* on the right and *Wálu Kúli Raon* on the left hand; from thence it runs in a straight direction past *Asappura Tibbi* and *Pipal* on the right, and *Malha Jungh Lúlu-wála* and *Tibbi Kusainé-wala* on the left. These villages are all small and insignificant, averaging from thirty to sixty mud hovels.

The current to-day was so sluggish and the wind so foul, that where the deep channel ran under high banks we had recourse to the tracking rope. There was too great a depth of water to admit of using the bamboo, and where the banks were unfavorable to tracking we had recourse to the oar. The boatmen only used one at a time, and that alone required the services of more than half the crew; the rest were occupied at the stern oar (which is used for a rudder) in counteracting the efforts of the rowers. We made but little way by these

means, and the boatmen seemed very glad to abandon the oar for the rope where the banks admitted of tracking.

After passing the village of *Pipal* we came in sight of the right bank of the *Beáh* or *Beás*, stretching across the horizon from N. E. to S. W. It is very high, and has a commanding appearance contrasted with the flat country which it overlooks. Before arriving at the junction of the *Beás* and *Satlaj* we passed a small river on our right, near the village of *Andrísa*. This was the *Wenh*: it measured in breadth at the mouth forty yards, but was much narrower a little higher up, and had a depth of 12 feet. The *Wenh* rises in the hills which recede northwards from *Belaspur* at a place called *Ghar Shankar*, and in its course through the *Doab Bist Jalindar*, passes between *Phagwára* and *Jalindar*; from thence southward to *Dakni ká Sarái*, and south-west to *Nakodir*. From *Nakodir* its direction is west to near *Sultánpur*, when it turns to the south and enters the *Satlaj* below *Andrísa*. The length of its course may be roughly stated at sixty kos; its bed is never quite dry, but it has very little water during the months of January, February, and the early part of March.

The *Beás* joins the *Satlaj* about two kos below *Andrísa*. It has by no means so large a body of water at the junction as the latter river, but its current is stronger and water clearer. The high bank which was visible from *Pipal*, is more than a mile from the present channel. After meeting, the two rivers are split into numerous channels, divided by shoals and sand-banks. The *Satlaj* throws off one large and a number of smaller branches to the left, but its main channel continues its course under the right bank past the ghât of *Hari-ke*, carrying with it the water of the *Beás*. The large branch to the left runs under a high bank past the village of *Bhidan-wála*. The ghât at *Hari-ke* is near three miles below the present junction of the two rivers. The village itself and *chhâoni* are on the top of the high bank at a distance of a mile and a half across the sand from the ghât. RANJIT SINGH has always a party of horse from one to two hundred strong stationed at this place. From the 14th to the 28th December the boats were detained at *Bhidan-wála* in expectation of the arrival of the mission from *Lahór*. During this time I had ample opportunity of judging of the extent of traffic passing by this ghât. Thirty-two boats with three men to each were unceasingly employed from morn to night in transporting loaded hackeries and beasts of burthen of every description across the rivers. I observed little difference on one day from another—it was a scene of constant activity and bustle.

The passage of the ghât generally occupied from fifteen to twenty minutes.

Nearly the whole of the trade of *Affghánistán*, *Kashmír* and the *Panjáb* with *Hindustán*, and by *Bombay* and *Calcutta* with Europe, passes by this ghât. Independent of the foreign trade, it is a great commercial thoroughfare for the interchange of the productions of the countries more immediately on the banks of the river *Satlaj*. The *Malk Rohi* from the neighborhood of *Farid koth*, *Ropur koth*, &c. sends by this route the immense quantities of grain which it supplies to *Lahór* and *Amritsir*. Lighter articles, the *báfta* and fine cloth for *pagrís*, manufactured in the *Doáb Bist Jalindar* at *Ráhon*, *Phagwára* and *Hushiarpur*, which are in greater demand in the upper part of *Hindustan*, pass also by this route.

I was unable to ascertain the average amount of daily collections at the ghât, from the circumstance that the duty of great part of the merchandize which passes is not levied till its arrival at *Amritsir*, and merely pays for a *rowána* in crossing the river. It is the same with merchandize coming from *Amritsir*, which is taxed before leaving that place; this refers to the right bank of the river.

The following list, obtained from the ghât munshí, shews the rate of collection on the left bank.

For a camel loaded with grain,	0	5	0
For ditto ditto with salt,	0	5	0
For ditto ditto with *qund shakar*,	0	7	6
For ditto ditto with *shakartari* and first kind of *kirana*,	3	0	0
For ditto ditto with cloth,	4	11	0
For a large *tárí gárí*, loaded with any description of articles, except grain,	1	15	0
For a *gárí* load of grain to merchants,	1	5	9
For ditto to brahmans, to *faqirs* and *bhats*,	0	13	0
For ditto to a maund of coarse *kirana*,	0	1	9
For ditto to a maund of *pushmina*,	4	1	0
For ditto to a maund of opium and indigo,	2	0	0
For ditto to a donkey load of grain,	0	1	3
For ditto to a bullock or pony load of grain,	0	1	9
For ditto to a *gárí* load of salt,	1	13	0

At *Jáné-gill*, 12 miles below *Hari-ke*, the united streams of the *Beás* and *Satlaj* are called the *Ghara*, but known to the natives by the name *Nai*. Between *Hari-ke* and *Firozpur* are the ghâts of *Hámad-wála* and *Talle-wála*: the former has twelve, and the latter ten boats. Part of the trade of the *Panjáb* with *Hindustán*, and a small portion of that from *Khorasán* and *Affghánistán* which enters the *Panjáb* at *Dera Ismael Khán*, crosses the *Satlaj* at these ghâts. The roads by which the

trade passes from them and from *Hari-ke* are much infested by robbers. In the immediate vicinity are the Dogrí and Jat zemindars who are notorious for their thieving propensities. From *Hari-ke*, and lower down the river, to *Lahór* and *Amritsir*, the Akalis; and from *Firozpur* and *Hari-ke* to *Ambalah*, the country of the Sodhie Sahebs has to be passed. The merchants engaged in this trade contract with the owners of the camels and *gúrís* for the safe conduct of their goods to their place of destination, and these latter make their own arrangements with the disorderly tribes whose territory they have to pass through; the escort, one of their number, is generally sufficient to ensure safety.

Below *Hari-ke* on the left bank of the river a tract of heavy grass jungle extends for several miles—it is here and there interspersed with the *jhau*; and there are numerous inlets and creeks from the river which insulate great portions of it. The islands thus formed are covered with the thickest jungles; those of the *jhau*, which is strong and elastic, are almost impervious to horsemen, while those covered with grass rising to the height of twelve and fourteen feet, are cut into deep ravines and contain large pitfalls. Tigers are found in these jungles. I went out in pursuit of them with Sirdars RATAN SINGH, GHIRJA REA, and a large number of his followers mounted on horseback. The Sirdar gave strict orders to his men not to use their matchlocks, and I anticipated the novel gratification of seeing a tiger attacked and killed sword in hand. The traces of them were innumerable. Every *nala* we crossed presented fresh foot marks; and though not so fortunate as to encounter any, we must have been following close upon them the whole day. The ground is unfavorable to the sport both for horsemen and elephants, owing to the number of *daldals* and quick-sands.

On the 3rd of January at *Firozpur*. The fort which is distant about three miles from the river was built by Sultán FEROZ III. nephew to the emperor GHIAS-U'-DIN (TUGHLAK), and who reigned from A. D. 1351 to 1357. It is an irregular building, of no strength, and having little means of defence. The interior is filled up with soil to half the height of the outer walls, and crowded with paltry brick houses and mud hovels separated only by alleys about six feet wide. The present possessor of the fort and adjacent territory is RÁNI LACHMAN KAUR, widow of DHANA SINGH.

NOBÁHU SINGH, the brother of GUJAR SINGH, one of the joint Sikh rulers of *Lahór*, was the first among the Sikhs who conquered and held this territory. From him it descended to his son GUR

BAKHSH SINGH, who added to it large possessions on both sides of the river. On the death of GUR BAKHSH SINGH, his four sons divided the territory between them, and the fort and adjacent lands fell to the share of DHANA SINGH before mentioned. DHANA SINGH dying without male issue, his three surviving brothers put in their claim to the estate, but the widow LACHMAN KAUR referred her cause to the Political Agent at *Ambála*, and it was ultimately decided in her favor by a reference to the Sháster law.

The *Kaggar* river, from which FIROZ SHÁH III. dug a canal to the *Kerah*, is said to have emptied itself into the *Satlaj* near *Firozpur*. We found no trace of it. If the *Kaggar* be understood to be the same river with the *Gaggar* which ran between *Ambála* and *Sarhind*, and afterwards received another river from *Shahabad* and the *Saraswati* from *Thanesar*, there must be some mistake in supposing that it ever joined the *Satlaj* near *Firozpur*. The old course of the *Gaggar* is well known; after reaching the *Bhatnér* frontier it went by the name of *Sótre*, and its direction through the desert to near *Dilawen*, where it was lost in the sands, may be traced by the forts of *Suratgarh*, *Chehárgarh*, *Phulra 1st*, *Phulra 2nd*, *Mojhgarh*, *Marrath*, *Rukkanpur*, which were built on its banks. This channel has long ago been filled up with sand, and it is only here and there at long intervals that any traces of it remain.

From the 3rd to the 12th of January we were detained at *Firozpur*, surveying the boundary of the Sirdarni's little territory. We found it very ill defined and disputed on every side. Of the country we saw, not more than one-thirtieth part was under cultivation; the rest was either entirely barren or covered with a low straggling brushwood of no value. There was a large tract of *karil* and *jhan i* jungle, and I also heard of a forest of *sisu* at some distance, but did not visit the spot to ascertain the fact.

In the *jhand* and *karil* jungles, which I traversed in following the *Firozpur* boundaries, I observed several sites of towns and villages, and a great number of fine *paka* wells, now half filled with rubbish and fallen to decay, but which sufficiently prove that the country was formerly thickly inhabited. It has suffered much from the misrule which has long prevailed. The petty states by which it is surrounded are so promiscuously interwoven in their limits that it would be difficult to point to one among them which is not at variance with all the rest as to its boundaries. To this circumstance must be mainly attributed the immense quantity of waste land which meets the eye in every direction; for no sooner does one party

attempt to reclaim a portion from the desert, than the rest interfere to dispute their right to the soil. As we receded southward from the river, the sand assumed that undulating appearance which is described as characteristic of the skirts of the Indian desert, small mounds occurring at intervals, the soil of which was hard and covered with thorn and brushwood. The wells at a distance from the river were of considerable depth; but the territory, as was once the case, might be made independent of them and fertilized at very little expense. The dry bed of a *nala* called the *Sukrí* traverses it in various directions, and it would only require a canal a mile in length to let into it the waters of the *Satlaj* near *Tihára*.

The zemindars are Jats and Dogres (also a caste of converted Hindus); they are chiefly engaged in pastoral pursuits, rearing large herds of buffaloes, on the sale of the *ghee* and milk of which they depend for subsistence. It is probable they have been driven to this life by the unsettled state of the country, which precludes in a great measure all agricultural employment; it does not appear that they are from remote time a pastoral people. The country, as I before observed, bears marks of having been much more generally cultivated at an earlier period; and though the present race have become addicted to predatory habits, arising from the circumstances of their situation under petty authorities at variance with each other, it would not be difficult, under a better ordered government, to give them a taste for more peaceful and industrious occupations. At present they are miserably low in the scale of civilization, and the feuds existing among them, which are fomented rather than suppressed by their rulers, are not unfrequently the cause of bloodshed. The faith they profess is the Muhammedan, but they are grossly ignorant on the subject of their religion, and do not pay much attention to the outward forms of it. The Korán is little consulted. The elders of the village decide most of their differences, and the parties not abiding by their decision are left to seek their own redress.

In the detection of theft and other offences, the practice of chewing rice and immersing the head under water, and other equally infallible tests, are commonly resorted to. Every species of torture is put in practice by the authorities to obtain forced confessions.

There is little difference observable in the appearance of the peasantry here from the same class in the vicinity of *Lodiana*; but beyond *Firozpur* the Dogre caste are distinguished by a greater swarthiness of complexion and harsher features. They are also more dirty in their dress and persons, and many among them go bare

headed. The Hindu merchants, from the command which they have of money, exercise a preponderating influence in the internal management of the *Firozpur* domain. The ryuts, from their extreme poverty, are forced to mortgage their crops to provide themselves with seed and the necessary implements of husbandry. Money is advanced at an enormous rate of interest, the lowest in the most favorable seasons being half an anna per month for every rupee; but the necessities of the people are such, they are now frequently obliged to pay 1½ anna per month, and compound interest is charged after three months. The cattle and even the ploughs (which resemble those used to the eastward), are the property of merchants. It requires three pairs of bullocks to work a well during twelve hours of the day, and the quantity of ground cultivated is fifty *kacha* bigahs. The poor from the neighboring territories bordering on the desert resort to the banks of the river to cultivate the autumnal crops and earn a bare subsistence, but their attachment to the desert in preference to the climate near the river prevents their settling.

On the afternoon of the 11th we took leave of the Sirdarni and started next morning for *Mamdot*. A mile beyond *Firozpur* the river divides into two branches, the deep channel continuing under the left bank running separate for more than a mile; they again unite, and soon after splitting again unite at a short distance above the ghât of *Bare-ke*. *Bare-ke* is in the direct road from *Firozpur* through *Kasur* to *Lahór*, from which it is distant thirty kos. It is the nearest point of approach of the *Satlaj* to that city. There are only four boats at the ghât, which is not a very considerable thoroughfare.

The boats here are quite different from those higher up on the *Satlaj*. They are flat-bottomed, but have high sides, and both ends are pointed; they measure about thirty feet in length by ten in breadth, with a depth of two and a half to three feet, and are very strongly built: the waste is partitioned by heavy beams running across, which give strength to the sides. The poop and forecastle are planked. Altogether there is an appearance of lightness and hardiness about them which makes them as much surpass the *Ravi* boats as those do the craft in use higher up the *Satlaj*. The mode of propelling them is somewhat the same as sculling. An immense oar is lashed to the stern, the arm of which usually consists of two, or three joined pieces of wood, and is curved in such a manner that the end or handle stretches horizontally over the poop, where one, two, or three persons are placed to work it to and fro. It serves both to propel and direct the boat in its progress.

Near the village of *Kilcha*, where a small *nala* enters the *Satlaj* from the south, we were met by the headman of the Pathán chief of *Mamdot*. He was attended by a small party of Pathán horsemen armed with bows and arrows for the chace. They were all equipped and well mounted, and distinguished by a soldierly bearing. They escorted us along the bank, occasionally flying a hawk or discharging an arrow at the black partridge, which their progress through the *jhau* and cultivation disturbed from their hiding places.

The soil on the left bank was a rich loam, the deposit of the river; when dry it is much split into fissures, and riding over it rendered exceedingly disagreeable, if not dangerous, and where moist it is barely capable of supporting the weight of a horseman.

Between the villages of *Kandi-ke* on the left and *Chawá'a* on the right bank, we passed another ghât, where there were four boats of the kind last described. The country partially cultivated on both sides, and the river broad and uninterrupted in its channel. After passing *Futtuéwála* we saw no villages near the banks for a distance of five kos, the *jhau* jungle in most places obstructing the view. The river again intersected with sand-banks and banks low.

We halted below *Mamdot;* estimated distance from *Firozpur* 11¼ kos.

The fort is distant two miles from the present channel of the river. (In the rainy season the river runs within half a mile of its walls.) It is a square with a round tower at each corner and one in the centre of each face. To the east and west are gateways. The outward walls are of burnt bricks fifty feet high, and ten thick, of *paka* and *kacha*. The interior space is filled up with the soil from the outward moat, and rises to half the height of the walls: the whole is crowded with houses, separated only by narrow alleys barely two yards in width. The towers command an extensive view of the surrounding flat country.

The present possessors of the fort and adjoining territory are a Pathán family, formerly masters of *Kasur* and other large possessions on the opposite side of the river. The old fort, on the side of which the present one was raised, is said to have been built in the time of MUHAMMED SHÁH III. the son of the GHIAS-U'-DIN TUGHLAK SHÁH. In the reign of AKBAR and his successors it was attached to the sirkar of *Debalpur* in the Súbah of *Multán*. After the decline of the *Delhi* empire it was destroyed by the Dogre zemindars to prevent its being used as a stronghold by the marauding Seiks; but soon after, when the *Lahór* province and the greater part of the Báwuní

of *Sarhind* fell into the possession of these adventurers, SOBHÁ SINGH KUAHERA, one of the three joint rulers of *Lahór*, overran the country and bestowed it in *jághir* on one of his followers, KAPU'R SINGH THOGA. This person repaired the fort and held undisputed possession for a long period; he extended his territory as far as the *Baháwalpur* and *Khai* frontier, but owing to some measures highly offensive to his Mussalman subjects the Dogres, they rose against him and he was compelled to flee for assistance to SOBHÁ SINGH. SOBHÁ SINGH sent a force with him and reinstated him. The Dogres again rebelled and called in RAI AHMED MUNJH to their aid; but it not being in his power to assist them at that time, they were obliged to effect a reconciliation with KAPU'R SINGH, who continued in possession. At a subsequent period RAI AHMED MUNJH expelled KAPU'R SINGH from the country and established himself at *Mamdot*. He razed to the ground the remains of the old fort, and built the present one on its site: it remained the seat of authority under him for upwards of nine years. At his death he was succeeded by his son RAI ILIÁS, on whose death shortly after without issue, the Dogre zemindars, fearing a return of their old enemies the Sikhs, sent a deputation to wait on NIZAM-U'-DIN KHÁN, and QUTUB-U'-DIN KHÁN, the Pathán chiefs of *Kasur*, and to invite them to come and take possession of the fort. Accordingly the retainers of RAI ILIÁS's family were expelled, and QUTUB-U'-DIN KHÁN and his family formally reinstated as their rulers.

NIZÁM-U'-DIN KHÁN and QUTUB-U'-DIN KHÁN had been troublesome enemies to Mahá-rája RANJIT SINGH, during the time they held possession of *Kasur*, and had resisted by every means in their power, and by inciting others to resist, the ambitious designs of that chief. He made repeated attacks upon their forts, in all of which he was repulsed; at length, finding force unavailing, he had recourse to other measures, and by bribes and artifices succeeded in sowing dissension in the family of NIZÁM-U'-DIN KHÁN, and instilling treachery into the minds of his kinsmen and followers, two of whom basely murdered their chief in his sleep at *Kasur*. His brother QUTUB-U'-DIN, who was absent at the time, returned and surrounded the fort, but failed to secure the traitors. Suspecting all alike, he withdrew his confidence from his own kinsmen and committed the custody of his forts to a family of Syeds. He then entered into negotiations with the ruler of *Lahór*, in the course of which SAIF-U'-DIN SHÁH, one of the Syeds above-mentioned, was won over by the Mahá-rája and betrayed the trust reposed in him by QUTUB-U'-DIN. The Syeds under his orders delivered up to the Mahá-rája's officers all the forts in their custody.

The widow of NIZÁM-U'-DIN was leagued with the Mahá-rája against QUTUB-U'-DIN, who, unable to stand his ground, came to the resolution to abandon *Kasur* and his possessions north of the *Satlaj*, and soon after retired to *Mamdot*. There he remained in undisputed possession till the Mahá-rája crossed the river in 1808-9, when, seeing that resistance was useless, he wisely conciliated his enemy by a voluntary submission. The Mahá-rája confirmed him in the possession of *Mamdot* on the usual condition of military service, and he continued to furnish a quota of two hundred horse for the service of the state.

QUTUB-U'-DIN KHÁN died about a year ago at *Lahór*; he had always been anxious to throw off his allegiance to the Mahá-rája and be taken under the protection of the British Government. In 1826 he openly sought the protection of Captain MURRAY, Political Agent at *Ambála*, but on that occasion was, after some correspondence, directed to return to his allegiance to the *Lahór* Rája.

The present possessor of the *jaghir* is JAMÁL-U'-DIN KHÁN, the son of QUTUB-U'-DIN KHÁN. He was not at *Mamdot* when the Mission passed, but his younger brother, a fine lad of about fourteen years of age, paid us a visit, which we returned. The interior economy of their establishment showed a thorough disregard of the conveniences of life. Men and horses were indiscriminately huddled together in the different court-yards inside the fort, and of the two the horses were perhaps the better lodged.

Hawking and hunting the deer seem to be the great occupation and business of their lives. At our interview with the young chief, the subject of merchandize on the river happened to be introduced, and some questions were asked as to the relative price of grain at *Mamdot* and lower down the river, at which the whole assembly stared with unfeigned astonishment, and referred us for an answer to our questions to some *baniahs* who were sitting at one corner of the house tops when our interview took place.

The *Mamdot* territory extends upwards of thirty kos along the banks of the river, and varies in breadth from fifteen to seven miles. It has been much improved since it came into the possession of the present family both in its productions and population.

From *Lodiana* to *Mamdot* there is little difference of soil and produce. The ground near the river becomes harder and richer. As you leave *Lodiana* and approach *Firozpur* the light sand disappears. In the autumn are sown *géhun*, *nukhud*, *chola*, *kangani*, *munj*, *barrera*, *massan* and *jo-chana*, which are reaped in the spring, or during April and May. The garden vegetables of that season

are *benghan, kire, chulai ság, tarkakril, turbuze, karbuze, khurja chaka.* Tobacco is also grown in small quantities. In the spring and as late as June are sown *nai shakar* or sugar-cane, *máki, júar, másh, mung, moth, kanjad* or *til, bájra, pambzár;* and the vegetables are turnips, carrots, spinach, *soha, gandana* or leek, *gandálon ká ság, karam ká sáig,* onions. If rain falls plentifully in January, they have an intermediate harvest of coarse rice and other small grains, which is reaped in June. Above the *Mamdot* territory the ground requires much manure to render it productive, but below it commences what is called the *Serab* country, where the overflowings of the river leave a rich deposit, which requires but one turn of the plough to yield a plentiful harvest, and where wells are little used for purposes of agriculture. Gram is not grown in any quantity below *Mamdot,* and the sugar-cane totally disappears.

On the 14th we started from *Mamdot.* The banks of the river in some places higher than we have hitherto anywhere observed them. The land is here irrigated by means of *kahrez* or water-courses; pits are dug close on the banks of the river, and water let into them by channels dug through the banks and raised from them by the Persian wheel.

We passed a few temporary hamlets near the river, but villages were at a distance, and distinguishable only by the clump of trees by which they were surrounded. Opposite the village of *Bábul-ke* was a ghát with two boats.

The *jhau* jungle on both sides of the river high and thick, but parched up. At sun-set we came to on the right bank near the village of *Kagge-ke,* where was a remarkably fine *pipal* tree. Estimated distance from *Mamdot* 11½ kos. Our land party halted at *Mohan-ke* on the left bank, about three kos from the river, as it is said to be a larger place than *Mamdot.*

On the 15th we arrived at *Bagge-ke,* estimated distance by the river 10 kos. Villages at a distance from the banks, which were for the most part covered with *jhau* jungle and the *kana* reed. Now and then a small patch of cultivation intervened.

The channel much intersected by sand-banks: winding in the river inconsiderable. We passed one ghát, at which there were two boats.

On the 16th at *Ladhu-ke,* estimated distance by the river 7½ kos. At the village of *Johad-ke,* the only one close on the banks, there were two boats and a number of the temporary wells or *kahrez* before described. I observed one where the water was conveyed over a sand-bank across the bed of the river for the distance of half a mile,

and was then raised by a well and Persian wheel to a higher bank, over which another channel conducted the water to the permanent banks of the river. Here the same apparatus raised the water to a level with the country to be irrigated.

The river increasing in breadth and more winding than yesterday; the banks occasionally twelve and fourteen feet high, and covered to the water's edge by heavy *jhau* and grass jungle, which are likely to prove embarrassing to boats tracking up the river.

On the 17th we arrived at *Jagveré*, estimated distance 15½ kos. About four kos beyond *Ladhu-ke* we passed the boundary of the *Mamdot* territory opposite to *Kallandir-ke*, and, a kos further on, entered that of Nawáb BAHÁWAL KHÁN, opposite *Rana-watta*. Between these places there is a dense forest of the *jhau* which rises to the height of twenty and more feet, and is almost impenetrable. The zemindars of these parts find it a secure refuge from the oppressive demands of their rulers. The little cultivation they engage in depends much on the course of the river. They have no settled habitations, but wherever the banks of the river afford facility for digging their temporary wells, they erect their hamlets of grass and *kana* reed, and commence cultivating. A slight change in the course of the river often obliges them to remove to a more favorable spot, and it rarely happens that the same people cultivate the same fields for three seasons together.

We passed the ruins of a village, *Watter Shah*, on the right bank, where there was a ghât with two boats. Opposite the village of *Azmut-ke* we were met by the officer in charge of the Khán's frontier district, ULLA BACHAYA, the nephew of the Khán's Vizier, a sufficiently mean-looking personage, and who, in dress and manner, led us to draw no very favorable conclusions as to the style of the *Bahâwalpur* court. He was attended by a handful of ill-mounted and dirty-looking horsemen, whose sombre and uncombed appearance formed a striking contrast to the gayer equipments of our Pathán friends.

Winding in the river considerable. In a few places where confined by high banks, we had an uninterrupted deep channel averaging seven hundred yards in breadth.

At *Jagveré* we found Nawáb GHULÁM QÁDIR KHÁN, the mehmándár sent on the part of BAHÁWAL KHAN to attend us to *Bahâwalpur*, and who had been waiting our arrival at this barren spot for the last three months. On the morning of the 18th he paid us a visit, and we were introduced to a corpulent, good-humoured, *baniah*-looking person, whose manners, if not highly polished, were frank and

unaffected. He was richly dressed in cloth of *khimkáb*, with a handsome *lúngí* for a turban, and wore a superb shawl for a *kamarband*; but the whole was in bad taste, and his attendants were as wretchedly shabby and mean as he was fine. The Nawáb spoke a very intelligible Hindustáni, but the language of his followers was quite foreign to us. It differs from Hindustáni, not so much perhaps radically as in the termination of the words, and the peculiar tone and manner in which it is spoken, which is drawling and nasal, much more disagreeable to the ear than the Panjábí of the bawling Sikhs. We were better pleased with the boatmen of the *Bahawalpur* boats than with any one we saw in this train of our new acquaintances. Their manners contrasted favorably with the rude specimens we brought with us from *Lodiana*. They have much the appearance of a sea-faring people —much of the alacrity and briskness which we admire in our own sailors.

The *Bahawalpur* boats are strongly built, but clumsy. In shape they are square fore and aft; the poop and forecastle are planked, and the former raised very high, so that the person steering is able to look over the *chappared* apartment which is in midship. The rudder is of curious and unhandy build, but has great power. The largest of the boats there measured eighty feet in length and about three feet in depth. They are all furnished with a square sail and masts which strike; and have two oars of immense size, the largest requiring six and seven hands to ply each of them.

On the 19th at *Bunga Jawin-ke*, estimated distance 7¾ kos. On starting from *Assap-wála* we were greeted with the novel and pleasing sound of a sailor's cheer from the crews of the *Bahawalpur* boats. Each boat's crew, as their boat left its moorings and dipped oars into the water, gave out a long pealing sound, which was responded to by all the rest in succession. The cry, as near as I could distinguish the words, was "*Bham, Baha al Hai.*" (*Baha al Hai* is the name of a patron saint of the boatmen of this country and on the *Indus*.) The boatmen stand to their oars, and every muscle of the body is brought into play in the motions which they go through. When the oars are dipped deep into the water, the outside men are frequently suspended from the handles which they drag down by their weight till the opposite ends or shafts are disengaged from the water. I should say there is more exercise with less fatigue in this than in our method of rowing. The rowers keep good time.

We had to contend against a strong wind, which prevented our making much progress to-day. We passed only two or three villages

on the right bank. We left the district of *Assap-wála* (which begins from *Rana-watta*) and entered that of *Gurjiana* or *Fattehgarh* about four kos before we arrived at *Bunga Jawán-ke*.

The country from *Rana-watta* to *Gurjiana* was formerly taken possession of by LAINA SINGH, one of the joint rulers of *Lahór*. Mahárája RANJIT SINGH subsequently took it from CHET SINGH, the son of LAINA SINGH. It was afterwards held by BHAI LÁL SINGH, and taken from him by QUTUB-U'-DIN KHÁN, who annexed it to the *Mamdot* territory. About three years ago, BAHÁWUL KHÁN, called *barú* BAHÁWUL KHÁN, in distinction to the present Khán, conquered it from QUTUB-U'-DIN KHÁN, since which time it has remained annexed to the *Bahúwalpur* territory.

The country increasing in wildness and the jungles thicker the further we proceed.

On the 20th to *Chine*, estimated distance seven kos. The villages at a distance from the river. On the right bank heavy jungle nearly the whole way. We came down a noble sheet of water to-day, where the river ran without a curve for some miles between moderately high banks.

On the 21st to *Bachian-wála*, estimated distance eight kos. We passed a few temporary hamlets on the river side, but the *jhau* jungle prevailed with little interruption on both banks throughout the journey. The banks high and the channel less intersected by sand-banks than usual. We left the district of *Gurjiana*, and entered that of *Musáferan-wála*, about two kos before we arrived off *Bachian-wála*.

A few bricks of an enormous size were picked up at a village on the way down, (*Bharám-ke*.) They had been taken from some ruins laid open by the river about three months previously. The ruins were described by the villagers as the remains of the wall and turret of a fort sunk more than six feet below the present surface of the surrounding country. They said that the marks remained in the banks where the bricks had been washed away, that by digging other parts of the ruin would be found more perfect. It was determined to visit the place on our return from *Bahúwalpur*. The bricks were marked with three curved lines in the shape of a horse-shoe, and from that circumstance referred by the Hindus of our party to the period of the *Treta Yug*.

On the following day, the 22nd, we crossed the river and went to *Pákpatan*, distant about eight miles from our boats and about five from the nearest point of the river. It is approached from a perfectly level and open plain of four miles in extent, and, seen from that distance,

has the appearance of a citadel perched on the summit of a lofty eminence. It is built on the *thae* or site of the ancient fort of *Ajwadin* or *Ajodin*, and is a place of great sanctity, having been the residence for a number of years of the celebrated Mussalman saint Shekh FARID-U'-DIN, to which circumstance it owes its present name of *Pákpatan*, or the ferry of purity. Under its former name of *Ajwadin* it is celebrated as the spot near which the *Satlaj* has been so often passed by Mussalman conquerors in their invasions of *Hindustán*. In A. D. 997 *Ajwadin* was taken and plundered by Sultán NÁSIR-U'-DIN SABACTAGI'N; but accounts vary as to whether he crossed the *Satlaj* in that expedition: in some he is stated to have extended his ravages as far as *Bhatnér*, the capital of the *Bhatti* country. In A. D. 1001, Sultán MAHAMED GHAZNAVI, the renowned son and successor of SABACTAGI'N, forded the *Satlaj* in the vicinity of *Ajwadin* and plundered *Bhatnér*. In his subsequent numerous invasions of *Hindustán* he followed this route more than once.

In A. D. 1079 Sultán IBRÁHIM crossed the *Satlaj* at this point in his second Indian expedition. After the Ghaznian dynasty, Sultán MAHAMED GHORI', called SHAHÁB-U'-DIN, passed by this route and by *Bhatnér* when he took *Asi* (or *Hansi*) in his battles with rája PITHAURA. In A. D. 1397-8 the conqueror AMIR TIMOUR in his invasion of *Hindustan*, after laying in ruins *Débalpur* and *Ajwadin*, proceeded across the river with part of his forces and destroyed *Bhatnér*, whither the inhabitants of the two former towns had fled for protection.

Close under the town to the north is the dry bed of a river which they call the *Dandi*, propably the *Dond* mentioned by Major RENNELL. Four kos more to the north is another dry bed of a river which they call the *Sohag*; and beyond this about ten kos from *Pákpatan* is the old bed of the *Beás*, which, separating from the *Satlaj* below *Hari-ke*, formerly ran close under *Kasur* and did not again join that river till within twenty miles of *Neh*. In the time of AKBAR, the *Doáb Bist Jalindar* extended to *Hamadpur Dar Behli*, fifteen kos above *Neh*.

To the south of *Pákpatan* in coming from our boats we crossed a *nala* which had a very high bank; its bed was in some places dry, in others it had one and half feet of water. I inquired of the villagers if they had any particular name for it, but they said not; neither did they know any thing about the *Harari Narnay* or *Qoud* mentioned by Major RENNELL. The ground between this *nala* and the *Satlaj* was low, covered with thick jungle of the tamarisk and patches of fine-looking wheat. It is no doubt overflowed in the rainy season, when

the breadth of the river from the bank of this *nala* to the opposite high bank must be more than four miles.

We remained at *Pákpatan* till the 26th, making arrangements for reducing to order the predatory tribes of that neighborhood.

On the 23rd we visited the shrine of Hazrat Shekh FARID SHAKAR-GANJ* in the town of *Pákpatan*. We had to ascend more than forty feet to the top of the mound on which the town is built. The ground sounded hollow to our horses' hoofs as we threaded through numerous narrow streets and alleys, many of which were lined with miserable objects of charity, among whom here and there might be seen females enveloped in the *burkhá*, pretended descendants of the Prophet, who importuned for alms with a perseverance which we found it difficult to resist. After descending again by a flight of steps to a level with the surrounding country, we were conducted into a small square paved court surrounded by the lofty brick walls of the adjacent houses. In the centre of this stood the *maqbará*, a plain insignificant building, having one small apartment, in which was the grave of the saint covered with faded drapery. There were two doors to this apartment, one to the north and one to the east. That to the east, called the "door of Paradise," is never opened but on the fifth day of the sacred Moharam, when numbers of pilgrims, both Hindus and Mussalmans, come to visit the shrine, and all who pass through this door-way are considered saved from the fines of perdition. The door-way is about two feet wide, and cannot be passed without stooping, and the apartment itself is not capable of containing thirty people crowded together: yet such is the care which the saint takes of his votaries on these occasions, that no accident or loss of life has ever been known to occur. A superlative heaven is allotted to those who are first to enter the tomb on the day mentioned. The rush for precedence may, therefore, be better imagined than described. The crowd of pilgrims is said to be immense, and as they egress from the sacred door-way, after having rubbed their foreheads on the foot of the saint's grave, the air resounds with their shouts of FARID! FARID! Several relics were shewn to us, among which the most curious was, a round flat piece of wood of the size and shape of an Indian's bread or *chapáti*. In the long fasts which the saint imposed on himself, he is said to have solaced his hunger by gnawing this hard substance.

There is a couplet very common throughout the *Panjáb* which has reference to this story.

The ancestors of Shekh FARID-U'-DIN first came to *Multán* in the

* See some account of the same saint by Munshi MOHUN LA'L in the last volume.—ED.

train of BEHRAM SHÁH, of the Ghaznavi family, and continued to fill situations of trust and emolument in that province, until it fell into the hands of Sultán MAHAMED GAURIE, (SHAHA'B-U'-DIN.) When Hazrat JALA'L-U'-DIN, the father of Shekh FARID, fled to *Cháwe Múshaikh*, a village on the banks of the *Satlaj*, where he lived the life of a hermit, practised great austerities and became celebrated for his great sanctity. At this place Hazrat Shekh FARID-U'-DIN was born; he was sent for his education to *Multán*, and afterwards spent many years in travel. At *Multán* he became celebrated as a *Súheb Karámat*, or worker of miracles, and many ridiculous stories are told of his performances. Among others it is related that whenever he felt hungry he would throw into his mouth a handful of dust or pebbles which immediately became sugar. He practised similar metamorphoses on the goods of other people, and turned so many things into sugar that he was universally known, and is so to this day, by the affix to his name of *Shakar-ganj*. Hazrat Shekh FARID-U'-DIN SHAKARGANJ and his posterity were chiefly instrumental in converting to Islámism the numerous different tribes of Játs and Gujar or Gickers, descendants of the Rajpút shepherds, who so often fought bravely against the invading armies of the north. The descendants of Bábá Shekh FARID are supposed to have inherited from him the power of performing miracles, and several of them became celebrated throughout *Hindustán* for their sanctity. At *Ajra*, *Síkru*, and *Dehli* their shrines witness to the respect in which their memory is held by the Mussalman population. AKBAR SHÁH owed to the prayers, we are told, of one of the family (Shekh NUR-U'-DIN, or NIER-U'-DIN) the birth of his son JEHÁNGIR. In the early attempt of the Sikhs to lay waste the country between *Multán* and *Lahór*, one of the descendants of Shekh FARID-U'-DIN at *Pákpatan* placed himself at the head of a number of converts, Ját peasantry, and kept his ground so well against these marauders that they thought it advisable to come to an amicable arrangement with him; and, in a treaty which he concluded with one of their chiefs, he was allowed to enjoy in independence the revenues of *Pákpatan* and several villages attached to it. At a later period, when the Sikhs became united under one chief, the Shekh-zadas were despoiled of their possessions. The Mahá-rája now allows them one thousand rupees a year for their maintenance, derived from the town duties of *Pákpatan*; besides which, they have a fourth share in four small villages in the neighborhood.

On the 27th to *Toba Sádit*, in the district of *Musá-firan-wala*, estimated distance nine kos.

On the 28th to *Akú-ke*, in the district of *Cúsim-ke*, estimated distance nine kos.

On the 29th to *Dola*, where we entered the district of *Jheddo*, estimated distance seven kos.

On the 30th we passed through the districts of *Jheddo* and *Sháh Farid*, and entered the *Húsilpur* district about two miles before we came to our halting place at noon, estimated distance nine kos.

On the 31st we halted at noon.

On the 1st of February at *Palra*, estimated distance $8\frac{1}{2}$ kos. The face of the country varies little in appearance, being day after day the same succession of tamarisk jungle, the deep green of which is now here and there relieved by a shrub resembling the willow in leaf and color, which the natives call *jhat*, and from the root of which the *miswáks* or tooth-cleaners are commonly made. From *Rúná-watti* near the *Mamdot* and *Baháwalpur* frontier the signs of cultivation gradually disappear; and near *Pákpatan* the country becomes extremely wild; we lose all trace of habitations near the river, save, par hazard, a few temporary grass hamlets. After entering the *Húsilpur* district an improvement is perceptible. We again see the Persian wheel at work, and the banks of the river occasionally lined with a wonder-gazing populace. The canals and water-courses increase in number as we progress onwards. Those we have hitherto seen vary in breadth at their mouths from ten to twenty yards, and are at present dry, being much above the level of the river, but from early in May to the end of September they serve to irrigate the country to the distance in some instances of thirty miles from its banks. Smaller branches are cut in every direction from the main canals, so that the whole country is covered with them, and travelling in that season rendered disagreeable and difficult.

During our journey of the last two or three days we have been pleasingly reminded of having entered a Mussalman country by the strict attention every where paid to the time of prayer. In the open fields, where a minute before the air has resounded with the voice of labour, every thing is suddenly hushed,—the shrieking Persian wheel is at rest, the cattle are freed from the yoke, and the peasants may be seen ranged together in small parties on their mats of the palm tree, going through their forms of devotion with an air of the greatest decorum. The sight struck us from its frequent occurrence.

Of the tribes which inhabit along the banks of the river from *Firozpur* to *Baháwalpur*, those in the neighborhood of *Pákpatan* and below that place, are said to be the most wild and disorderly and the most

addicted to predatory habits. The Dogre and Dogre Badela are chiefly confined to the *Mamdot* territory and higher up. At *Loadi-ke*, below *Mamdot* they are succeeded by the *Wattu Karral Chishti* and other branches of the Jat tribes, descendants of the Rajpút shepherds, who formerly inhabited the country on the *Ravi* between *Multán* and *Lahór*. These people still lead a wandering pastoral life, seldom building anything but temporary sheds, and may fairly challenge the name applied to them of "*khána badásh.*" They are a race inured to every hardship, ill fed and worse clothed, but capable of enduring great fatigue under every privation. They are much celebrated for the length and rapidity of their journeys on foot in their nightly excursions to carry off cattle from neighboring territories. Nothing in their appearance would indicate their possessing a superior share of physical strength or activity; they are tall spare men, generally ill made, and without any great shew of bone or muscle. If their hardiness of constitution is any where perceptible, it is in their harsh swarthy features, which though not pleasing are manly.

These tribes, even in the best days of the Mogul empire, were never brought into any proper subjection or made to feel the influence of a well-ordered government. They continued embroiled in feuds among themselves, in the settlement of which the arms of authority seldom interposed. A system of *sálahanj*, or retaliation, than which nothing can be conceived more productive of crime and general disorder, has prevailed among them from time immemorial. This system authorizes the redressing an injury not only on the person or property of the injurer, but on any of his relations, friends or neighbors whom chance may throw into the power of the injured party; consequently a few disorderly persons have it in their power to involve the whole country in their quarrels. The original cause of their feud is generally a dispute as to the right of pasture, or a few buffaloes may have strayed from the herds of one village to those of another. This leads to reprisals, in which blood is sometimes shed, and blood calls for blood long after the original cause of dispute has ceased to be remembered. If this was the state of affairs when the country on both sides of the river was under one authority, we may judge of what it must be now that the river separates two hostile powers.

The system of *sálahang* which was before confined to villages near each other, now extends along the whole line of the opposite banks of the river. Instead of a few buffaloes stealthily abstracted during the night by ten or twelves herdsmen, villages are now openly attacked and plundered at noon-day by gangs of from one hundred to two

hundred desperate freebooters acting under acknowledged *Sir-kurde*, (leaders.) The river affords them an easy means of escape, and, owing to the existing relations of one of the powers with our Government, prevents their being pursued by the authorities of the opposite side. This security from punishment would of itself be sufficient encouragement to their predatory habits, but they are moreover instigated and abetted by the petty district officers of their own governments, who share in the spoils without incurring any of the danger of their enterprises.

Female infanticide prevails generally among these tribes. Mothers appear to have little affection for their offspring and little respect for their marriage tie, if one may judge by the frequency with which it is violated. A wife leaving the protection of her husband and absconding with another man, is frequently claimed and restored by the intervention of the authorities after an absence of nine or ten years, and any children she may have borne to her paramour in her absence, are equally divided between him and her lawful husband.

On the 2nd February at *Tufiere*, estimated distance 11½ kos. The banks of the river low, and the river perceptibly diminished in breadth. We passed a town on the right bank hidden in a deep and extensive grove of palm trees; the cupola of a mosque peeping through the foliage, and a few solitary palms standing far apart, thrown out from an horizon lighted by a brilliant sunset, reminded us forcibly of Bengal scenery.

The country on the left to-day was more open, the river excessively winding.

On the 3rd to *Durpur* near *Khairpur*, estimated distance 10½ kos. The country on the right was well cultivated and apparently rich, dotted with clumps of the beautiful palm tree, and the banks of the river abounding in temporary wells and water courses;—that on the left was low and barren and covered with a very thin jungle of the tamarisk, the river extremely winding in its course.

Early in the day we were met by SARFARA'Z KHÁN, and at a later hour by MÍR MUHAMMED QÁIM and MUHAMMED DÁIM, native gentlemen of the Khán's household and relations of the Khán's Vizier. One of these gentlemen, although holding the responsible appointment of Mír Bakhshí, is said to be quite uneducated and ignorant of his letters; but we found him more polished in his manners than the generality of those we had met.

About half way on our journey we passed the road to *Mailsian*, a town on the right bank, the former capital of BAHA'WAL KHÁN's terri-

tory on that side. It once boasted a very strong fort, but from the time this territory was first threatened by the Siekhs it became the policy of the *Bahâwalpur* government to destroy all their forts and *garhís*, and this among the rest was razed to the ground.

As we approached *Khairpur* we came in sight of the *Rohi* (or desert), and were for some time quite at a loss to conjecture what object it was which skirted the horizon for many miles. The sand-hills rise abruptly from the plain which intervene between the desert and the river, and from a distance the intervals between them are not perceptible. Seen from our boats, they formed a distinct and well defined outline resembling an unbroken chain of low hills. The *Rohi* runs in the shape of a promontory directly up to the town of *Khairpur*, which is about a mile distant from the present channel of the river: in the rainy season the town only intervenes between the sand of the desert and the waters of the *Satlaj*. When we visited it, we ascended from one of the streets directly on a steep hill of sand and found ourselves fairly in the desert surrounded by sand-hills and the debris of houses, walls and huts more than half buried under them. The desert encroaches on the town every year, and many of the present inhabitants remember the time when *Khairpur* was distant at least two miles from the nearest point of it. The houses are chiefly of unburnt bricks, and the round domes of the mosque are also built of the same material. It is said to be very durable, but the secret of its durability lies more in the paucity of rain which falls in this country. The town has a tolerable bazar, and contains 400 shops of all descriptions; it was formerly a place of considerable traffic, but has fallen off since the time of the great BAHA'WAL KHÁN. Small *kafilas* occasionally arrive here from *Hánsi* and *Hissár* across the desert, and the tobacco grown in this vicinity and in the *Hásilpur* district is exported by this route in large quantities to *Delhi*, where it is not unfrequently sold as *Multán* tobacco.

The only *pakâ* building in the town is a large mosque now in ruins: it is ornamented with painted tiles to represent enamel, but too little remains to give any idea of the effect of this style of ornament when in perfect preservation. In the neighborhood are the ruins of several mud forts, formerly the seat of *Dáudputra* chiefs of the Keharani branch of the tribe, who arrived in this country sometime before the Pirjani branch, of which the present Khán is the head. They were engaged in constant feuds with the 2nd BAHÁWAL KHÁN, and made several attempts to subvert his power, but were unsuccessful, and at last forfeited their own possessions in the struggle. The only surviving

member of this family is now a fugitive at the court of the *Bikánir* rája.

The morning of the 4th being a halt, we made a short excursion into the desert with the intention of looking for floricans and antelopes: the former, as well as the leek and bustard, are very numerous where the desert approaches near to the river; but they are much more frequently put up in the stunted tamarisk bushes which crown the sand hills within the skirts of the desert, than in the tamarisk coppices nearer the river. After crossing the first ridge of sand-hills, the highest of which might measure sixty feet, we came in sight of a level plain of hard soil extremely bare, with only here and there a small mound of shifting sand, and extending for several miles till the eye was arrested by what appeared to be a ridge similar to the one on which we stood. One could have fancied that this tract had recently been usurped from the river by the desert. We learned from the people with us that the whole of it is usually cultivated after a favorable rainy season, when it produces plentiful crops of the smaller kind of grain on which the inhabitants of this country chiefly subsist. Owing to the unusual drought of the last five years, it had remained a waste. The ridge on which we stood was the site of what had been an extensive town now buried many feet under the sand;—the soil between the sand hillocks was covered with particles of burnt brick, and I was able to trace the ruins of houses for upwards of a mile along the ridge. These have, no doubt, arrested the sand in its progress when it is carried in volumes by the south-west monsoon towards the river, and may account for the high and very abrupt appearance of the skirts of the desert at this point.

After a short walk in the sand, rendered disagreeable by a dreadfully scorching sun, we returned towards our boats. The Dáudputras who accompanied us as guides were highly amused at our style of sporting, which they termed *jurida-tor*, and only becoming a *shikari* by profession. We were little less amused at their strange jargon and at the readiness of their sporting equipments. Their weapon is the rifle with the curved stock common throughout *Affghánistán* and the countries west of the *Indus*. The length of the barrel varies, but is never much longer than that of our musket. They have a great contempt for our use of small shot and for small game, which they only pursue with the hawk. The flesh of the hog-deer and antelope is esteemed a great dainty. In pursuit of the latter a Dáudputran will take his provisions for three days, mount his camel, and sally forth in the hottest season; when, to use their own expression, "to face the

desert is to face death." In these excursions he sometimes remains out as long as five days, wandering about after the tracks of the deer, until his supply of water is exhausted; when, if he has not been successful, he makes for the nearest pool and takes his chance of the deer coming to drink. These pools are not of frequent occurrence in the desert, and none but a person acquainted with every stump bush and hillock, and every feature of the ground, could attempt to go in search of them. That many of the *shikaris* have this intimate knowledge of the desert, is proverbial:—"they know it better than the scholar his book, or the Háfiz his Korán;" and their knowledge is the more astonishing when we consider the narrow and minute observation which it implies. So much do the sand-hills resemble each other, that a common observer might be removed to fifty different stations in the course of the day and fancy every one the same.

The prohibitions to shooting game which are strictly enforced in the Nawáb's preserves and jungles near the river, do not apply to the desert, where the *shikáris* are at liberty to roam at large; and the knowledge they acquire of its localities is highly prized by their chief. They are sometimes lost, but casualties of this kind are attributed to a stroke of the sun, or to exhaustion from want of water, or to the bite of a reptile called the flying-snake, (said to be numerous,) rather than to their losing their way. The stars assist to guide them when, as is often the case, they travel by night.

One of our guides proved himself a good marksman by taking off the head of a carrion kite with a ball from his rifle at fifty yards; he brought the bird up to us and observed that "that was the manner in which his master would serve the káfir Sikhs, if we would allow him to cross the river." The Khán, it would appear, finds it politic to impress his subjects with the idea, that nothing but a fear of the displeasure of the British Government has hitherto prevented his taking steps to recover his lost dominions;—while they on their part assure their chief, that but for this fear they would conquer the country to-morrow, and not leave a light burning from the *Indus* to *Lahór*.

The familiar manner in which our guides spoke of the former possessors of the old forts and gardens about *Khairpur* as we passed through, struck me as highly characteristic of the primitive state of society of the people. Their greatest chiefs they designated by their simple surnames. In speaking of the Khán, they called him simple Baháwal Khán or Khañ, never adding any affix of respect. Every garden or fort we passed had its anecdote of the feuds that had existed between the Keharani and Pirjani branches of the tribe. Much

was said about the "*bahádurí*" of the fallen chiefs, the devoted courage of their adherents, and the time which a few resolute men had kept the second BAHÁWAL KHÁN and his whole army at bay. The knowledge possessed by our guides of these affairs seemed to be intimate; and could I have understood clearly all that they said, I might during our walk have learnt the whole history of the tribe. On their first settlement in the country, the Dáudputras, to add consequence to their name, as well as to increase their power, are said not to have been very scrupulous how they swelled their numbers, and people of all descriptions were admitted into their tribe.

The opinion I formed of the lower orders from what I saw to-day was not very favorable. One cannot be long in their society without being struck with the absence of that urbanity which is so universal among all orders in *Hindustán*. With each other they appear to be on easy terms, using little ceremony. With strangers they are either rough and betray a suspicion and distrust in their manner, or their courteousness is awkward and descends to servility. One of our guides, whose garments would hardly have gained him admittance into any gentleman's gateway, gave me to understand that he was no common person, but one who lived in the Khán's presence. I should not have believed him but for an anecdote which I heard of one of the former chiefs soon after my return to camp, and which was to the effect "that the first BAHÁWAL KHÁN would have given a severe bastinado to any person who had dared to come to his *darbár* in new or clean clothes." The person who related this anecdote to me, lamented the degeneracy of the present ruler, "who has brought himself," said he, "to look upon clean clothes without aversion, and, what is worse, allows his prime minister to ride in a *baili* or a bullock carriage, for which last innovation he will one day be sorely visited."

We remained at *Darpur* on the 5th. This place is pleasantly situated at about half a mile from the present channel of the river. A fine piece of grass turf sprinkled with dwarfish palm extends from it down to the banks of the river. The fort of *Darpur* is still in good preservation, but has not been occupied since the family was dispossessed by the second BAHÁWAL KHÁN. It is of mud and *paká* bricks, in form a square, with turrets at the angles; the outer walls enclose an aria of nine hundred square yards. Near the fort are the lines of one of the Khán's disciplined battalions, stationed here under the command of a half-caste Portuguese; their uniform was a blue coat with scarlet facings, flaming scarlet shakos, with brass ornaments. They were drawn out to receive us on the day of our arrival Evening had

closed in before we arrived, and they burnt blue lights, the effect of which with their salute was good, but so much cannot be said for the stunning noise of their barbarous drums and fifes which accompanied it. The battalion mustered about three hundred firelocks; besides these, there were two small pieces of artillery with a few gulandáz dressed in red *pagrís*, brown vests, and blue cossack *paijámas*. They were very cleanly in appearance, and I was told that the whole of the Khán's troops had been newly clothed in anticipation of the arrival of the mission.

On the 6th to *Goth Nur Muhammad*; estimated distance by the river 8½ kos. The *Khairpur* district extended for two-thirds of the way, when we entered that of *Goth Nur Muhammad*. In consequence of the unusual drought of the last four years, and the floods from the river having inclined to the right bank, the districts from *Khairpur* to the eastern frontier now barely pay the expenses of collecting the revenue.

Throughout this extensive tract of country, embracing a length of more than one hundred kos, there are only three officers in authority for the collection of revenue and the preservation of order. One is at *Khairpur*, one at *Goth Qáim Ráis*, twelves miles beyond, and the other moves alternately from *Gurjiána* to *Múbárakpur*, but resides chiefly at the latter place. In harvest time, *mutsaddis* or *muharirs* are dispatched from *Ahmadpur* to collect the revenue in these parts, but they never remain long. So little authority does the Nawáb possess over the districts east of *Múbárakpur*, that he may be said to levy rather an occasional tribute from them than any fixed revenue. The property of the zemindárs consists chiefly of cattle, and is consequently moveable; and as the Nawáb finds it more troublesome than advantageous to be continually sending large forces to overawe them, they frequently escape two or more seasons successively without paying any thing to his treasury, either by crossing to the opposite side of the river, or concealing themselves and their cattle for a time in the large tracts of jungle which every where abound. Once in two or three years a force is sent, when, if the zemindárs refuse to come in and pay their rents, their houses and the little land they cultivate are laid waste, and all their cattle that can be found seized and carried off. They are at liberty to release them on paying what is called the "*trinni*" or tax for pasturage, and the arrears of their tribute in kind. The amount of this varies with the means which the government officers have of enforcing, or the *ryats* of resisting the demand. A tax is also levied from them, commonly designated and known among them as the "theft licence," with a view, perhaps, of eradicat-

ing their propensity to thieving, but which most probably encourages the habit. As it is a tax openly paid by the principal Ráth or Ját zemindárs to the Nawáb, free-booting is in a measure countenanced and rendered honorable by it. The present Nawáb, I am told, has never hitherto visited the country to the east of *Múbárakpur*, from a dislike to trust himself among these tribes.

The river diminishing in breadth and the banks low; country more open on both sides, but still presenting large tracts of heavy *jhau* jungle.

We lost sight of the Desert soon after leaving *Darpur*. The scenery near *Goth Nur Muhammad* is rather pleasing from the number of palm trees in its neighborhood; here also are ruined forts and a few ruins of *paka* bricked houses, the former residence of chiefs of other branches of the *Dáudputra* tribe.

On the 7th to *Dera Baká*, near which the district of *Goth Nur Muhammad* terminates. The villages are more substantial, and the country more open and better cultivated as we proceed. The people also appear to be less rude, and not so scantily clothed as we found them in the frontier district. The revenues are collected regularly and with little trouble.

On the 8th to *Bakarpur*, the ghât opposite to *Baháwalpur*; estimated distance by the river 4½ kos. The river narrowed extremely during the two last days' journey. The banks have become very low and the current sluggish, running about 1½ miles in the hour. The country is well cultivated on both banks of the river, the people are more engaged in agricultural pursuits, and herds of cattle are less numerous than they were above *Khairpur*.

From the 8th to the 25th of February the Mission remained at *Baháwalpur*, employed in negotiation with the Nawáb. The town of *Baháwalpur*, the most populous in the Khán's dominions, is situated about two miles south-east of the present channel of the river; during the floods a branch of the river runs close under its walls and the intervening space, at present a moist sand covered with low straggling *jhau*, is then one sheet of water. At the present season only the beaten tracks to the ghât are passable on horseback and the rest is quagmire. The walls of the town enclose a number of gardens, and from the river the only signs of buildings we could descry through the trees were the minarets of the large mosque. The approach to the town from the river is by a number of narrow lanes separating gardens, in which the bed-mushk, the apple and orange tree, the mulberry, and rose bushes are seen in great profusion. A bridge of

one arch built of burnt bricks conducts over an insignificant moat to the *Multán* gate by which we entered the city. On the day of our visit to the Nawáb, the tops of the houses in the streets were crowded with spectators, who observed a profound silence as we passed: this was so remarkable that I cannot but think particular orders must have been given on the subject, as the same circumstances attracted the notice of the Honorable M. ELPHINSTONE and his party on their passage through *Baháwalpur* in their Mission to *Cábul*. We passed through a long narrow street which forms the principal bazar, and it appeared well inhabited; the other parts of the town betray a decreasing population. Many houses are empty and in ruins. It now contains 2,025 shops of all descriptions. The number of its inhabitants may be estimated at 20,000. The second BAHÁWAL KHÁN always spent some months of the year at this place, but since his death it has been quite deserted by the court, and other causes have not been wanting to account for its diminished importance. Before the Nawáb relinquished his territory on the opposite side of the river, the greatest portion of his revenue, which he receives in kind, was collected here, as also the indigo and rice for exportation. This is no longer the case, and the trade of *Affghanistán* with Central India, to which it chiefly owed its flourishing condition, has both fallen off in quantity, and no longer pursues so exclusively as formerly the route by *Baháwalpur*. The decreasing income of the present Nawáb and his father has compelled them to levy arbitrary contributions from the merchants, who have deserted the place in consequence. The *Amritsar*, *Shikárpur* and *Márwár* mercantile houses have still their agents here, but comparatively little business is transacted between them. A'GÁ RAFFI, a Jew, who had formerly a house at *Derá Ghází Khán*, and is connected with the Jews of *Bokhára* and *Kaub Chand Shikárpurí*, are the most wealthy merchants at the place. *Bahawalpur* still maintains its celebrity for the manufacture of silk cloth or *lungís* and *gulbadans*, which latter are of a superior texture, and more lasting than those of *Amritsar* or *Benares*. The quantity exported is not very great, and chiefly to *Sindh*. Rifle barrels are also made of very superior workmanship both at *Khairpur*, *Baháwalpur* and *Khánpur*, but the handsomest are made only to order, and to be sent in presents to *Sindh*, *Lahór* and other places.

The inhabitants of *Baháwalpur* and of the few other towns in the *Baháwalpur* territory, are chiefly Hindus, and these in appearance the very outcasts of their race, dirty, squalid and miserable. Though they are tolerated in the practice of their religion, and have a high

priest or *gusáin* who enjoys some consideration with the Nawáb, they are looked down upon by their Mussalman fellow subjects with the utmost contempt, and subjected to every kind of oppression. Some few of them enjoy offices of trust near the Nawáb and the other great men of his court, but this they owe to the indolence and ignorance of their masters, which quite unfits them for the tiresome details of business.

On the 25th we again started in our boats from the *Bindra-wála* ghât at *Bahâwalpur* to proceed to the junction of the five rivers of the *Panjáb* with the *Indus* at *Mithankot*.

We arrived sometime after nightfall at *Nahur-wâli*; estimated distance from *Bahâwalpur* 11½ kos. The banks of the river were exceedingly low almost throughout our journey, and the river still diminishing in size, not measuring more in some places than 150 yards across. The current not averaging 1½ miles an hour. There were numerous sand-banks, and the river, saving that it is deeper, is more insignificant in appearance here than at any part of its course from *Ropur* downwards. The numerous canals which are cut from below *Khairpur* might account for this, but very few of them are fed from the river in the cold weather.

The country on both sides of the river was tolerably open, and cultivation more general, with fewer tracts of the *jhau* jungle. The inhabitants on both sides of the river are chiefly of Ját origin, mixed with a few Dáudputras and Baloches; they are not generally addicted to predatory habits, but the dismemberment of the Khán's dominions has involved them in the general disorder which now prevails.

On the 26th to *Mahabatpur*; estimated distance by the river 3 kos. At about two miles from *Nahur-wâli* we came to a heavy *jhau* jungle on the left bank, one of the Nawáb's preserves or hunting seats, where he had proposed that we should take our leave of him. We joined him towards the afternoon, and after witnessing the slaughter of a few hog-deer returned to our boats, with the promise to hunt with him again on the following day.

On the 27th we passed the day in hunting with the Nawáb. The following is a description of his mode of following that pastime.

The jungles in which the game is preserved, are divided and traversed in their whole extent by strong hedges made of twisted boughs of the *jhau* running at acute or at right angles with each other in the form of a funnel, into which the game is driven. The hedges are not made to join at the apex of the triangles, but a space is there left open and cleared of jungle in which the ambuscades are formed.

These ambuscades resemble in their relative positions an inverted funnel, the mouth of which joins that into which the game is driven. The Nawáb occupies the first place in front of the opening; at a short distance behind him, branching out to right and left, are two more ambuscades not far apart; behind these are others farther apart, and so on with the rest, which are so arranged that the sportsmen fire clear of each other. The ambuscades are formed of small hedges of the *jhau* high enough to conceal a person when seated on the ground: in the very high jungles platforms of eight and ten feet high are used for the same purpose.

When the tract of jungle is circular, it is first surrounded by a very high fence of the *jhau*, between which and the jungle a space is left for a road; then from the circumference fences are drawn towards the centre like the radii of a circle; the centre is freed from jungle and left open for the formation of the ambuscades. A number of dogs of all sizes and breeds, and from three to four hundred *sawárs*, according to the extent of line they have to cover, are then sent into the jungles from the outside, and close their ranks as they approach the narrow end of the enclosed space, hooting and shouting to drive the game before them. The Nawáb and his courtiers meanwhile lounge at their ease in their ambuscades. Conversation is carried on, at first freely, but as the beaters draw near, in whispers only. A crackling of the jungle or a waving of the grass is sufficient to put every one on the alert—the hand is instinctively directed towards the trigger, and you are prepared for tiger, deer, hog, or any thing that may make its appearance. The eye is strained to bursting to catch the moment of the beast's leaving the jungle, when, whatever he is, he will assuredly give a spring on finding himself in the open space. At last he bursts cover, and the object of your fond anticipations proves to be nothing more than a jackal; but before you have time to recover from your vexation at having your nerves unstrung by so unworthy a beast, and before you have time to brace them again, the jungle again crackles, the boughs break—you catch a glimpse of something bounding through the grass, and out springs a fine buck deer with his head low and haunches hard pressed by the hounds. He either stops for an instant amazed, or he has passed you before you can raise your gun to your shoulder: in either case you miss. At the report of your gun he stamps the ground in disdain and bounds on to fall a prey to some cooler sportsman among the twenty or thirty who send their balls whizzing after him. The Nawáb has as many as eight or nine rifles loaded and placed before him, and he uses them

so quickly and efficaciously, that unless the game comes very thickly, it is a bad day's sport for those who are permitted only to shoot after him. Dinner is always cooked at his hunting seat and sent out into the jungle for him, and served at noon. Several of his *musáhibs* (courtiers) partake of the meal with him, and inferior fare is distributed to the whole of his attendants. Even down to the *saises* and grass-cutters no man is allowed to remain hungry. After dinner all indulge in a siesta, and then to the sport again. Where the jungle is very extensive and not well enclosed, and the efforts of the horsemen are baffled by the game doubling round them, it is not unusual on a windy day to set fire to it. This is a sight to be witnessed. The sport is very exciting while it lasts, but the pauses during the time spent by the beaters in driving the game towards the ambuscades are t dious. The Nawáb and his minister frequently occupy these intervals in reading the *Korán*.

The Nawáb's hunting seats are mere temporary hamlets, the sides of which are formed of the *kana* reed, and the roofs thatched over with grass. A large enclosure is set apart for the Nawáb himself, which is surrounded with a strong and high fence of the *jhau*, making it quite private. This enclosure varies from two to three hundred yards square; at different angles of it are a place for his *daftar-khána* or secretaries, a place for his cook-room, and a place for his huntsmen or *shikáris*. He has sometimes an under-room attached to his own bungalow in the rear. In front of the bungalow is a rude *chabutrá*, raised from the ground about two feet, on mud pillars, and covered with an awning or canopy of cloth under which he holds his *darbár* and receives the reports of *shikáris*, who are sent out in all directions to bring tidings of game. In front of the *chabutrá* his horses are picketed. His minister and two or three others of the most consideration about him have separate hamlets prepared for them, but the rest of his followers rough it in the open air. Canvas tents are very little used even by the wealthier classes.

On the 28th we arrived opposite to *Mirpur*; estimated distance by the river 10 kos. As we approached the end of our day's journey the river became broader. There were still fewer tracts of jungle to-day, and the country rich and well cultivated, with many substantial-looking villages on either side.

March the 1st. We arrived at *Makhanbelá*, the ghât opposite to the town of *Uch*; estimated distance by the river 16 kos.

The river increased to-day to a fine broad stream; it was joined by an inlet from the *Chináb* river soon after we left *Mirpur*, and for the

last twelve miles, before its junction with the *Chináb*, it ran in a tolerably straight course, forming a fine body of water. There was one considerable winding near *Shirna Buchri*. The *Chináb* joins the *Ghára* a little above *Makhanbelá*, and these streams run together for a considerable distance without appearing to mix their waters. The line marked by the opposite color of the two streams is very distinct. The red-colored water of the *Chináb* and *Ravi* is prized by the people here much above that of the *Ghára*. The Nawáb when residing at *Ahmadpur* or *Dilawar* sends to this ghât for a weekly supply for his household, which is conveyed on hackeries in large brass vessels.

The breadth of the *Panjnad* at *Makhanbelá* in the present season is perhaps under 900 yards, but during the rains it is sometimes six miles across from *Uch* to the opposite side.

The country on the left continued well cultivated and open. On the right we had the dry bed of *Beah* and several creeks of the *Chináb*, forming islands covered with heavy *jhau* jungle and apparently pasture land. Numerous herds of buffaloes were grazing near the bank.

In the afternoon we went to visit *Uch*, from which we were distant about three miles ; the road was through a good deal of *jhau* jungle and over the beds of inlets of the river which scarcely supported our horses. The *Uch Bokhárian* is situated on the banks of the river, and was formerly the seat of a Hindu principality, which extended to near *Multán*. The town itself was then called *Walhaur*. Towards the latter end of the reign of IBRA'HÍM 1st of the Gaznaví dynasty in 1105, a number of wandering Musalmán devotees took up their abode there, and were tolerated by the ruling prince, Rája SHAM SHÁD, from the apparently harmless austerity of their lives. Among the number of these devotees was Shekh SYED JALÁL, who was gifted with the power of performing miracles, by which many were convinced of the truth of his doctrines.

Rája SHAM SHÁD was one of the first of his converts, and giving up all worldly affairs, he made over his territorial possessions to the Pír for the support of his followers. One or two others also deserve to be mentioned, as they gave their name to the towns now comprehended under the general name of *Uch Bokhárian*. Among these was a chief of the tribe of zemindárs called *Lálás*, who inhabited the country in the neighborhood. On the conversion of their chief the *Lálás* followed his example, and on his death built a sepulchre to his memory, round which they formed habitations ; hence the *Uch* of *Lálás*, the *Uch* of the Moghuls, and the *Uch* of the Jumals, were also named by the Pír after two of his favorite disciples, who died of the austerities which they practised, and were buried there.

We visited the tomb of the Pír Shekh SYED JALÁL BOKHA'RI'. The interior of the building was curious; the roof was supported by more than thirty arches resting on four colonades of wooden carved pillars; there were a great many graves and some relics from distant countries. Amongst these were the preserved spinal bones of several saw-fish. The pilgrims who go to *Mecca* from *Affghánistán* and the *Derajat* by passing down the *Indus*, frequently come thus far out of their way from *Mithankot* to visit the shrine of Shekh SYED JALA'L, and implore his intercession for the safety of their journey. A descendant of this Pir is still living at *Uch*, but the lands formerly belonging to the family which enabled them to live in a style of splendour and comparative refinement among a barbarous people, have long since been usurped, first by the názims of *Multán*, and since then by the Dáudputra chiefs. They have now barely sufficient for their support; their influence over the common people is, notwithstanding, very considerable, and they are generally respected.

From *Uch Bhokhárian* we proceeded to the *Uch* of the Gilanis, which appears to have been formerly joined to it, but is now distant about half a mile; on our way we passed through large topes of date trees. Hazrat Shekh MUHAMMAD GHOS JILA'NI', round whose shrine this town was built, and after whom it was named, was descended from Hazrat Shekh ABDUL QÁDIR JILA'NI' BAGHDÁDI', and came to *Uch* about the year A. D. 1394. The Dáudputras have continued to be his *murids* and the *murids* of his successors from the time of their first leaving *Shikárpur*.

This Pír's family had considerable assignments of lands in the vicinity of *Uch* before the arrival in the country of the Dáudputras, and up to the time of the 2nd BAHA'WAL KHÁN their territory and wealth had continued increasing, and MAKDUM GANG BUKSH, who was then the Pír Múrshid, was second only in influence to the Khán, and kept in his pay a considerable standing force; he built a fort at *Uch* and surrounded the town with a wall. His son, also named MAKDUM GANG BAKSH, headed a revolt of the Dáudputra tribes against the second BAHA'WAL KHA'N in 1799, and releasing BAHÁWAL KHA'N'S son, MUBÁRAK KHA'N, from confinement, set him in opposition to his father. The Khán besieged him in the town of *Uch*, destroyed the fort, and laid the town in ruins, and obliged the Pír with his son to flee to the territory of the Amírs of *Sindh*. The lands belonging to the Pir's family were on that occasion forfeited to the state, and have never been restored. A few years since a grandson of this Pír returned from the *Sinah* country to take up his abode at *Uch*, and six or eight wells have been allowed by the present Khán for his subsistence.

On the 2nd March to opposite *Núrwálá*; estimated distance 10 kos. We came to on the right bank of the river about three miles below *Sitpur*, and went in the afternoon to see that town. It is surrounded by an extensive grove of palm trees, and is celebrated for its dates and mangoes, which it produces in great abundance. The site is very elevated, and its name indicates its having formerly been a Hindu town. The old buildings are all of burnt brick and lofty, the streets dreadfully narrow and filthy, the country round it is pretty, but must be very unhealthy during the hot months, when it is entirely overflowed, leaving no means of communication saving by boats. It was formerly thickly inhabited, but now the half of the houses are in ruins, and it may have about 200 shops of all descriptions. The inhabitants of the town are chiefly Hindus,—those of the country, round, Játs and Beloches. Cattle are numerous, and the zemindars, both Játs and Beloches, predatory in their habits. *Sitpur* is said to have been formerly on the right bank of the main stream of the *Indus* which fell into the *Panjnad* immediately above it: it is now about 10 miles on the left side of the main stream, but during the hot weather the whole intervening space is one sheet of water. It is recorded that *qásids*, messengers with letters, were formerly in the habit of leaving *Multán* or *Derá Gházi Khán* in the morning, mounted on an inflated oxhide, and reaching *Sitpur* and *Ouch* by the rivers *Chináb* and *Indus* at noon. This mode of conveying letters is still sometimes adopted between *Derá Ghazí Khán* and *Shikárpur*, and during the height of the floods is very expeditious.

On the 3rd to *Cháván*; estimated distance 12 kos. The country on both sides appeared very rich, but without any great variety of foliage.

On the 4th we arrived at *Mithankot* on the right bank of the *Indus*; estimated distance 10 kos. The rapidity of the current increased very much as we approached the junction of the two rivers. The *Panjnad* all the way from *Ouch* is a beautiful stream, and, with the exception of one or two windings, runs straight to the south-west. On the 7th of March the Mission left *Mithankot* to return by a new route through the *Panjáb* to *Lodiana*. The boats were left under my charge to prepare for their return voyage up the river, with the exception of those belonging to the *Lodiana* merchants, which continued their voyage to *Shikárpur*.

From Lodiana to Bahâwalpur by the rivers Satlaj and Ghara.

Villages on the left bank.

Length of Stages and date.	Names of Villages.	Distance Kos. Apart.	Distance Kos. Inland	Caste.	Jurisdiction.
Dec. 9th.	Lodiana, ..				
	Rájpúrá, ..	1	¼	Ráin, ..	J. R.
12 kos by the nálá.	Haibuwal,..	½	¼	Ranghar	ditto.
	Baranhara,	2½	..	ditto,	R. S.
	Malakpúr,..	2	½	ditto, ..	J. R.
	Salempúr, ..	1½	½	ditto, ..	F. S. A.
	Ghanspúr,..	½	..	Gújar,..	ditto.
	Hanbar,.. ..	1	½	ditto, ..	ditto.
	Wallipura,..	1½	½	ditto, ..	ditto.
10th	Baniawálá,	½	..	ditto, ..	ditto.
	Wallipúr (puráua,)..	¼	..	ditto, ..	ditto.
4 kos.	Talvandi, ..	¼	..	ditto, ..	ditto.
	Aliwal, ...	¼	¼	ditto, ..	ditto.
	Bhundí, ..	¾	..	Rájpút Púliab	litto.
11th	Koth,.....	..	..	Gújar,..	litto.
	Gursian, ..	1	..	ditto, ..	litto.
	Tarivára, ..	½	½	ditto, ..	ditto.
	Shekh Chishtí, ..	¾	1	Chishtea	litto.
8 kos.	Bhamál,....	1¼	1	Rajpút,	litto.
	Salempúr,..	1¼	1	Ráin, ..	litto.
	Sidhuán, ..	1	1	Ját, ..	litto.
12th	Shaffipúrá,	1	¼	Rájpút,	litto.
	Abbupúr, ..	¾	1	Ráin, ..	ditto.
	Malsian, ..	½	½	ditto, ..	ditto.
	Harbuwál, ..	1½	½	Ranghar	M.R.K.
	Ballú-ke, ..	1	½	Gujar,..	ditto.
	Baghé-ke,..	1½	½	ditto, ..	ditto.
	Baghé ke (bárí,)....	1	½	ditto, ..	K. S. B.
	Ghura, ...	1½	½	ditto, ..	ditto.
	Burj, ...	1½	½	ditto, ..	ditto.
	Burj Bará...	1½	½	ditto. ..	ditto.
	Sanghú-wála	½	½	Dogres,	R. S.
	Sadáre-wálá	½	½	Gújar,..	ditto.
	Bhundí, ..	½	½	Harni & Ráin,..	ditto.
	Burj, ...	½	½	Ját, ..	ditto.
	Dahúhara,..	1	.	Dogres,	ditto.
	Koth, ...	1½	1½	Gújar,..	ditto.
	Gursiom, ..	½	2	litto, ..	ditto.

Villages on the right bank.

Gugg,.....	2½	1	Gújar,.	ditto.
Hujra, ...	2	½	litto, ..	ditto.
A Ghát, ...	1½	..	litto, ..	ditto.
Sudhpúr, ..	½	½	Ráin, ..	litto.
Maddipúr...	1	1	litto, ..	litto.
Purjion Beharépúr,	1	1	ditto, ..	ditto,

Length of Stages and date.	Names of Villages.	Distance Kos. Apart.	Distance Kos. Inland	Caste.	Jurisdiction.
	Villages on the left bank.				
	Giddarvindi,	½	..	Ját kheir	F. S. A.
	Jihára, ...	½	..	Ráin, ..	ditto.
	Kanuean, ..	3	1	ditto, ..	ditto.
	Laddiwá á,	¾	½	Gújar,..	D. & K. B.-ke.
14 kos by the river.	Tariwálá, ..	1	1	ditto, ..	ditto.
	Bhore, ...	1	..	ditto, ..	ditto.
	Chahaur, ..	½	¾	ditto, ..	ditto.
	Bhedánwálá,	½	1	ditto, ..	ditto.
	Bassian,....	1	½	Ját,....	ditto.
	Kamálpúrá,	¾	½	Gújar,..	ditto.
	Picha-ke, ..	½	½	ditto, ..	ditto.
	Sungalli, ..	½	½	ditto, ..	ditto.
	Abdul Rahmán,.....	1	..	Gújar, .	K. S. B.
13th	Miana Guzr,	2	½	Malláh,	D.
	Pipli, ...	1	1	Gújar,..	ditto.
	Isa álpúr,..	1	½	ditto, .	F.
	Fattehpúr,..	1	½	ditto, ..	ditto.
	Jhánean, ..	2	½	Ját,....	ditto.
10 kos by the river.	Jbabelán-wálá,.....	1	½	Jhabeil,	ditto.
	Mahá.ájwá-lá, ..	1	..	Ját Mahláj, ..	ditto.
14th	Múndi, ...	½	..	Ját,....	ditto.
	Wára Kálí Ráon, ...	3	..	Ját Kalí Ráon,	ditto.
	Malhá Jang,	1	..	Naipál,	ditto.
	Láluwálá. ..	1	..	ditto, ..	ditto.
	Tibbi Husseni, ...	½	..	ditto, ..	ditto.
	Villages on the right bank.				
	Kanmán Ját,	1	1	Ráin, .	R. S.
	Kannean2nd.	½	½	ditto, ..	ditto.
	Bhagian, ..	1	..	ditto, ..	litto.
	Thammúwálá, ...	1	..	ditto, ..	K. S. B.
	Amir Sháh,	½	..	Seyads,	ditto.
	Qasimwálá,	½	¼	Gujar,..	ditto.
	Rampúrá, ..	½	..	ditto, ..	litto.
	Kanjarawála, ...	½	..	Ráin, ..	ditto.
	Abdulpur, ..	½	..	ditto, ..	ditto.
	Bajáur, ...	1	¼	Ját,....	ditto.
	Salepúr,....	1	¼	Ráin, ..	ditto.
	Samanián,..	1½	..	litto, ..	ditto.
	Fahirpur, ..	½	..	litto, ..	ditto.
	Rámé-ké, ..	½	½	litto, ..	ditto.

N. B.—R. S. stands for Ranjít Sing. F. S. A. for Fateh Sing Aluwálá. K. S. B. for Kotshah Bundh-ke. J. R. for Jindh Rájá. M. R. K. for Mai Rúpán Kákar. D. for Dharmkot.

Length of Stages and date.	Names of Villages.	Distance Apart.	Distance Inland Kos.	Caste.	Jurisdiction.
	Pattú	½	..	Ját.....	K. S. B.
	Talwandi, ..	½	..	ditto, ..	D.
	Bern.	1	..	ditto, ..	Loian.
	Puncán.....	½	1½	ditto, ..	ditto.
	Jaggúpúra,	½	½	Ráin, ..	ditto.
	Kamálpúrá.	½	½	Ját Sandu.....	ditto.
	Kákar.....	1	1½	Ját Kákar, ..	K. K. S.
	Kang,.....	1	¾	Ját Kang,	K. S. W.
	Kusalghur,	1	..	ditto, ..	ditto.
	Mandi, ...	2	..	Ját Dhawar,...	L.
	Mandhiála,	1	1	Ját	ditto. ..
	Usafpura, ..	½	½	ditto, ..	R. S. S
	Tibbi.....		..	Ráin, ..	F. S. A.
	Pippal, ...	2	½	ditto, ..	\.
	Nakki, ...	1	1	Ját,....	F. S. A.
				Villages on the left bank.	
	Mannúwálá,	1	½	Machí,	F. S. A.
	Rúknewálá,	½	..	Saipál,	ditto.
	Singhi-ke,.	1	..	ditto, ..	ditto.
12½ kos.	Jhind.....	1	..	ditto, ..	ditto.
	Bhedá wálá.	1	..	Do Mulás, ..	ditto.
Jan. 12th	KilcháGolám Husenwálá,	¾	¾	Dogre Bahloche,	F.
	Báre-ke,....	1	2	ditto, ..	F. D. K.
	Kilcha, ...	2	½	ditto, ..	Mamdot.
	Kande ke,..	1½	½	Dogre Bahloche,..	ditto.
	Kande ke 2nd, ...	1	1½	ditto, ..	ditto.
	Bahak Bodle Khudá,....	1	1	Bodle	
	Bakhsh Khán-ke,..			Faqir,	ditto.
	Farid Khán wálá,.....	1	1	Kahur	
11¼ kos.				Patton.	ditto.
	Rahmuke. .	1½	1½	Dogre,..	ditto.
	Lakmir-ke,	½	½	ditto, ..	ditto.
	Mamdot, ..	1	1	Mixed Cast,..	ditto.
Jan. 14th	Vehre.	½	¾	Dogre,..	ditto.
	Wásti Kheire ke,.....	½	½	ditto, ..	ditto.
	Wásti Mujahad-ke, ..	¼	¼	ditto, ..	ditto.
	Mázam, ..	1½	1½	Máhtam,	ditto.
	Bunniwálá..	¾	¾	Dogre...	ditto.

Length of Stages and date.	Names of Villages.	Distance Apart.	Distance Inland Kos.	Caste.	Jurisdiction.
	Mattar Bahul-ke, ...	1½	..	Dogre,	Mamdot.
	Madu-ke, ..	1½	..	ditto, ..	ditto.
	Baje-ke,....	¾	..	ditto. ..	ditto.
	Mahitam. ..	¾	..	Mahitam	ditto.
	Baje-ke 2nd,	1	½	Dogre,	ditto.
	DullaMohan-ke,..	1	2	ditto, ..	ditto.
				Villagse on the right bank.	
	Andresa,....	1	1	Ját.....	F. S. A.
	Singhi-ke, ..	1	¾	ditto, ..	ditto.
	Chamba,.....	½	1	ditto, ..	A.-ka.
	Kamboh, ..	½	1	ditto, ..	ditto.
	Kurian.	½	1	ditto, ..	ditto.
	Harri-kePattan, ...	½	1	ditto. .	ditto.
	Talli, ...	1	1¼	AsulJát	Kasúr.
	Gandhár Singhwálá.	¾	1¼	Mixed,	ditto.
	Fattú-kewálá,.	1	1	Ráin, ..	ditto.
	Kujian	¾	1¼	ditto, ..	ditto.
	Dú wálá,	¾	1	ditto, ..	ditto.
	Fatú wálá,..	½	..	Dogre,	ditto.
	Kilcha.	1	1	Bhatti Rájput,	ditto.
	Sultán Chuna,.....	1½	1	Ját China,....	ditto.
	Mathianwá á	1	..	Dogre,	ditto.
	Wasti Seideke,.....	1	1½	Ráin, ..	ditto.
	Sheik Himal,	¾	1½	ditto, ..	ditto.
	Bahek Bodleke.....	1½	¾	Boddle,	ditto.
	Wásti Pattrike, ...	¾	¾	Ját.. ..	ditto.
	Ratnia wálá,	½	1½	Ráin, ..	ditto.
	Thulti Joske,.....	¾	1	Dogre,	ditto.
	Doburji,....	2	1½	ditto, ..	Khudian
	Pattar ke, ..	¾	1¼	ditto, ..	ditto.
	Sahare ke, ..	¼	1	ditto, ..	ditto.
	Khimi Jallúke, ...	1¼	1	ditto, ..	Mahmke
	Pirá Jallu-ke	¾	¾	ditto, .	ditto.
	Dhing-ke, ..	1	1	ditto, ..	ditto.
	Mujahna-ke,	½	¾	ditto, ..	ditto.
	Dhurji, ...	1	¾	ditto, .	ditto.
				Villages on the left bank.	
11½ kos.	Wásti Lakhi-Mohan-ke	¾	2	Dogre,	Mamdot.
	Mohan-ke...	¾	3	ditto, ..	ditto.
15th	Khugge-ke,	½	2	ditto, ..	ditto.
	Dhun-ke, ..	½	2	Ját,....	ditto.

N. P.—K. S. B. for Kárak Singh Budulep. K. K. S., for Khuwar Karak Singh, R. S. S. for Rája Sevchet Singh. A. for Akhalian F. for Firozpur. K. S. W. Karri Singh's widow. F. D. K. for Fateh Diakhan's jágir.

Length of Stages and date.	Names of Villages.	Distance Kos. Apart.	Distance Kos. Inland	Caste.	Jurisdiction.
	Toje-ke, ...	½	1¼	Dogre,	Mamdot
	Rukna Bodela, ...	¾	1¾	Bodelá	ditto.
	Shekh Bodela, ...	¾	1¾	ditto, ..	ditto.
	Rulla Keireke, ...	1	1	Dogre Bodela.	ditto.
9¾ kos.	Rehma Kheire-ke,	¾	1	Dogre,	ditto.
	Dulle-ke, ..	¼	1	ditto, ..	ditto.
	Middha,....	½	1½	ditto, ..	ditto.
	Pire-ke, ..	¾	2	ditto, ..	ditto.
	Dhandhi, ..	1½	2½	ditto, ..	ditto.
	Shabaz-ke,	¾	1	ditto, ..	ditto.
	Bagghe-ke,	1	2½	ditto, ..	ditto.
16th	Sadar Alamka	¼	2½	ditto. ..	ditto.
	Kári Baggeke,	½	2½	ditto, ..	ditto.
	Luddú-ke,..	¼	2½	ditto, ..	ditto.
	Lammochur,	½	½	ditto, ..	ditto.
	Keah, ...	1	½	Bodela,	ditto.
	Bahak Mohan-ke,....	½	3	ditto, ..	ditto.
7½ kos.	Bahak Jamál-ke,....	1	1½	ditto, ..	ditto.
	Bahak Sakke-ke, ...	¼	1¾	ditto, ..	ditto.
	Lado-ke, ..	½	1	Waltú,	ditto.
17th	Bahak Lashkar, ...	1¼	2½	Bodle,..	ditto.
	Bodle-ke, ..				
	Bahak Kallandar-ke,	1	1	ditto, ..	K. B.
	Rana Waltu,	1	½	Waltu,	A.

Villages on the right bank.

	Bahbul-ke,..	1	¾	Dogre,	M.-ke.
	Mahmun-ke,	¼	1¼	ditto, ..	D. U.
	Khugge-ke,	1	..	ditto, ..	ditto.
	Jhuggian, ..	½	..	Bodla,..	M.-ke.
15 kos.	Paij Girain,	1	¾	Dogre,	ditto.
	Lakke-ke, ..	¾	1½	Faqir Butter,	K.
	Ajebwálá,	¼	1¼	Mokul Ját, ..	ditto.
	Bhalil-ke, ..	1	¾	Bhambá Dogre,	ditto.
	Sarwan-ke,	1	1½	Bhambá,	ditto.
	Khanne-ke,	2½	..	Bhuggeke Dogre, ..	ditto.
	Khane-ke 2nd, ...	¼	1	ditto, ..	ditto.
	Pira-ke,....	¼	1	ditto, ..	ditto.
	Nur Mohamad, ...	¾	¾	Rupal Dogre,	ditto.

Length of Stages and date.	Names of Villages.	Distance Kos. Apart.	Distance Kos. Inland	Caste.	Jurisdiction.
	Kari, ...	¼	¼	Dogre Kasa,	K.
	Mahitum, ..	¾	1	Mahitam, ..	ditto.
	Sháh báz-ke,	¼	1	Dogre,	ditto.
	Sandar-ke,..	1¼	1¾	Wattú,	A. D -ke
	Jada Vazedke,	1¼	..	ditto,..	ditto.
	Bagge, ...	2	2	Jarril Ját, ..	ditto.
	Vazid-ke, ..	1¼	2	Wattú,	ditto.
	Khewah Vazid-ke, ...	1	1½	ditto, ..	ditto.
	Gujar Vazid-ke, .. .	1½	1½	ditto, ..	ditto.
	Pahulwan Lado-ke, ..	1	1	Wattú,	Atari.
	Wásti Lakhe-ke,.....	¾	1	ditto. ..	Dhunian
	Wásti Bhike-ke,.....	¾	1	ditto, ..	ditto.

Villages on the left bank.

	Gagan-ke, ..	2	½	Joyiá ..	A.
	Súbhán-ke,	1½	2	Wattú.	ditto.
	Mohamad-ke	1½	2	ditto, ..	ditto.
	Kándar-ke,	3	¾	Karral,	ditto.
	Asatwálá, ..	1	1¾	Chis i,	D. U.
	Jagve-e,....	3	..	Wattú,	A.
19th	Lakhe-ke, ..	1	½	Bhatti Faqirs.	ditto.
7¾ kos.	Amru ke, ..	½	½	Wattus.	ditto.
	Bare-ke,....	¾	½	ditto, ..	ditto.
	Peropi, ...	1	1	Karrol,	F.
	Búngá Jú-van-ka.. ..	3	3	Pathán,	G.
20th	Bahak Qalandar, ..	1	½	Bodle,..	Gúrjianá
7 kos.	Bedle-ke,				
	Buhak Tawakkul,	2	½	ditto, ..	ditto.
	Bodle-ke,				
	Gaddho-ke,	2½	½	Wattá,	ditto.
	Ratto-ke, ..	¾	¼	ditto, ..	ditto.
	Chuni, ...	¾	..	Chuni,	ditto.
21st	Rehmú-ke,	1¾	..	Wattú,	ditto.
	Kálu-ke, ..	1	¾	ditto. ..	ditto.
8¾ kos.	Jassu-ke, ..	1	..	ditto, ..	ditto.
	Shurf Ali Sháh, ...	1½	..	Seyad,	ditto.
	Bharam-ke,	1½	..	Wattú,	ditto.
	Mari, ...	1	..	ditto, ..	M. W.
	Bachianwálá,	¾	..	ditto, ..	ditto.
27th	Jewaya Beloch, ...	½	¾	Beloch,	ditto.
	Habib-ke,..	1	1	Wattú,	ditto.
	Chakko-ke,	1½	1¾	ditto, ..	ditto.

N. B.—K. B. stands for Killa Bamíwálá. A. for Asafwálá. M.-ke for Mahm-ke. D. V. for Dórul Umal. K. for Kangpur. A. D. K., for Atari Dhundhia-ke. F. for Fatehghar. G. for Gurjorianá. M. W. Musáfran wála.

Length of Stages and date.	Names of Villages.	Distance kos. Apart.	Distance kos. Inland	Caste.	Jurisdiction.
	Villages on the right bank.				
	Wásti Azmat-ke,....	¼	1	Wattú,	C.
	Walli Sháh,	½	1	Bodle..	ditto.
	Feje-ke,....	3¼	..	Téji Jár,	M-ke.
	Mahar, ...	2	1	Mahar,	ditto.
	Thakkar, ..	2	2	Wattú,	ditto.
	Thakkar 2nd,	¼	2	ditto, ..	ditto.
	Wásti Bande-ke, ...	½	2	ditto, ..	ditto.
	Kakke, ...	1	2	ditto, ..	ditto.
	WástiKhajúke,.....	2½	1	ditto, ..	ditto,
	Wásti Darike.....	¼	1	ditto, ..	L. W.H
	Durraj-ke, .	3	¼	Karral,	ditto.
	Bodle	2	¼	Bodle,..	ditto.
	Zinde ke, ..	2	2	Karral,	L-ke.
	Mauni-ke...	3	2	Wattú,	ditto.
	Mahlú ke,..	¼	1	ditto, ..	Haveli.
	Kale-ke,....	1	1	ditto, ..	ditto.
	Malli-ke, ..	2	..	ditto, ..	P. P.
	Malli-ke 2nd.	2¼	..	ditto, ..	ditto.
	Chakkú-ke,	¼	¾	ditto, ..	ditto.
	Ahalu-ke, ..	2	¾	ditto, ..	ditto.
	Mahmú-ke.	1½	¾	ditto, ..	K. K.
	Malkani, ..	1½	¾	ditto, ..	K.K-ke
	Packa Birahamka, ..	2½	1	ditto, ..	ditto.
	Villages on the left bank.				
9¾ kos.	HusainSháh,	1	1½	Sayad,..	M.
	Lalle-ke, .	1	..	Jovie of Mari,	ditto.
	Bahádur-ke,	½	¼	ditto, ..	ditto.
	Chave-ke Gúzar, ...	1	¾	ditto, ..	ditto.
	Tobah, ...	½	..	Sayad,..	ditto.
28th	Bhaura, ...	1	..	Udhieré,	ditto.
	Jhandu Khán, ..	¼	..	do. Wattú, ...	ditto. ditto.
	Jaháu Khán,	¼	¼	Abneri,	ditto.
	Sher Mahamad, ...	¼	¼	Udhuri,	ditto.
	Sháh ud din,	½	¼	Bodla...	ditto.
	Tugieri.	1½	1	Udhieré,	ditto.
9 kos.	Kot Qáim Khán, ...	¼	½	Lungah,	Q-ke.
	Mari Babulke,.....	½	1½	Karral,	ditto.
	Bunga Jánuka,...	½	1½	Pathán,	ditto.
	Bunga Ramika,.....	½	1½	ditto, ..	ditto.
	Masta-ke, ..	1	1½	Sullieré,	ditto.

Length of Stages and date	Names of Villages.	Distance kos. Apart.	Distance kos. Inland	Caste.	Jurisdiction.
	PieSikandar,	1	1	Chishtí.	Q-ke.
	Aku-ke, ...	1½	..	Sullieré.	ditto.
29th	Nihal-ke, ..	1	½	ditto, ..	ditto.
	Bahádur-ke,	¾	¾	ditto, ..	ditto.
	Husain-ke,	½	..	ditto, ..	ditto.
	Ballú-ke, ..	1	1	ditto, ..	ditto.
	Mulki, ...	¾	½	ditto, ..	ditto.
	Johad-ke, ..	1	¾	ditto, ..	ditto.
10¼ kos.	Muslie, ...	¼	¾	do. Muslí,....	ditto.
	Fattáhna. ..	¾	1	Dáudpotra, ..	ditto.
	Ditto,.....	¼	1	Futtahnu, ..	ditto.
	Jaddi-ke, ..	¼	1	Jaddi Ját, ..	ditto.
	Vazid Sháh,	¾	1	Khuggi,	ditto.
	Dulla,.....	¾	1	Ráiu, ..	Jhada.
	Villages on the right bank.				
	Mári, ...	1¾	1½	Chishtí.	K.K-ke.
	Munar, .. .	2	1	ditto, ..	ditto.
	Bhú ání,...	¾	½	Joyie,..	B. T.-ke Qilla.
	Mavánkot...	3	1	Kulachi,	ditto.
	Núá,.....	2	1½	Sayad,	ditto.
	Feroza, ...	1	2	Sullwu,	ditto.
	Tibbi Khánwaia,.....	3	2	Langah.	ditto.
	Lakho-ke,...	5	..	Sullieré,	K.K-ke.
	Ditto 2nd,..	¾	..	ditto, ..	ditto,
	Lakhu-ke,..	1	..	ditto, ..	ditto.
	Julyeri,... ..	1	..	ditto, ..	B-ke.
	Saho-ke. ..	3	..	ditto, ..	ditto.
	Villages on the left bank.				
30th	Wásti Mauli-ke, ...	½	1	Rain ..	Jhadú.
9¼ kos.	Bungá Jiwan.	¾	¾	ditto, ..	ditto.
	Wásti Jiwan,	¼	1	Joyie, ..	ditto.
	Kalú Sháh,	¾	¾	Sayad,	ditto.
	Núr Sú á,..	2	½	ditto, ..	ditto.
	Wá-ti Umar Beloch-ke,	½	1	ditto, ..	ditto.
	Kora Bhútna	1	1½	Bhutna,	ditto.
	Jáfar Sháh,	½	3	Sayad,	S. F.
	Shahar Sukka,.....	½	2	Luckouri, ...	ditto.
	Wásti Sialke,.....	1	2	Sial, ..	ditto.
	Gúl Sháh, ..	1	1	Sayad,	H.
	Nuni, ...	½	½	Nuni, ..	ditto.
Feb. 1st.	Korá Sháh,	3	½	Sayad,	ditto.
	Mojh Mahar,	½	¼	Luckveri, ..	ditto.

N. B.—C. for Chinnan. M-ke for Maruf-ke. L. W. H. for Lukhe Wattú-ke Haveli. L-ke for Lukhe-ke. P. P. for Pak Pattan. K. K. for Kot Kapura. K. K-ke for Kot Kabúle-ke. M. for Músáfrow walá. Q-ke for Qá-im-ke. B. T-ke for Baháwalgarh Tibbi-ke Qilla. B-ke for Baddura-ke. S. F. for Shahur Farid. H. for Hásilpur.

Length of Stages and date.	Names of Villages.	Distance Apart.	Distance Inland	Caste.	Jurisdiction.
	Mehrabpur,	½	¼	Luchveri, .	H.
8¼ kos.	Kallar-wah,	¾	1	ditto, ..	ditto.
	Boland Sháh,	1½	¼	Bodle,..	ditto.
	Sháh Hattie,	½	1	Dáudpotra, ..	ditto.
	Kore Sháh,	1	¼	Sayad,	ditto.
	Palra, ..	½	¼	Dáudpotra, ..	ditto.
2nd	Khái, ..	3	1	Ghazi Khanaru,....	ditto.
	Badhire, ..	1	1	Lakviri,	ditto.
	Ghafúrá, ..	2	1	Daultáná,....	ditto.
	Bhadourn,..	1	1	ditto, ..	ditto.
11½ kos.	Khairpur Chota, ..	2	.	Dáudpotra, ..	ditto.
	Núrpur, ..	1	1	Mixed,	ditto.
	Tufieri, ..	½	½	Tufieri,	ditto.
	Villages on the right bank.				
	Khokar, ..	1¼	2½	Khokar,	B-ke.
	Wásti Rahim Sháh, ..	1½	1	Sayad,	ditto.
	Salderi, ...	½	1¼	Salderi,	ditto.
	LakaSalderi,	1	¾	ditto, ..	ditto.
	Kora Bhútná, ...	½	½	Bhutná,	ditto.
	Wásti Hakam-ke. ..	1¼	½	Karral,	ditto.
	Márú Khán Beloch,....	1	1	Beloch,	ditto.
	Umar Gurja,	1	1	ditto, ..	ditto.
	Tewaná, ..	3	3	Tewani,	ditto.
	Gohar, ...	2	5	Lakviri,	ditto.
	Láldeh, ...	2	4	ditto, ..	ditto.
	Fodar, ...	1	3	Ját, ..	ditto.
	Arrain, ...	½	3	Rain, ..	ditto.
	Láldeh, ...	½	2	Daultána.....	ditto.
	Badura, ...	½	1½	ditto, ..	ditto.
	Kahur, ...	½	2½	Faqir,..	ditto.
	Sháda, ...	¾	2¼	Daultáná,....	B.
	Bahar Karm Allá Sháh,	2	½	ditto, ..	ditto.
	Kalú Sháh,	1½	..	Sayad...	ditto.
	Hassan Sháh, ...	1	1	Kúkari,	ditto.
	Kairnpur,	1	3	Wasseir,	ditto.
	Moze Wasseir, ...	2	.	ditto. ..	ditto.
	Dhalluan. ..	½	1	Bhubbi,	ditto.
	2nd Wasseir,	1	½	Wasseir,	ditto.
	Khángarh,..	1	1½	Bhabbi,	I. S.
	Khánpur, ..	1	3	Rain, ..	Malsian.

Length of Stages and date.	Names of Villages.	Distance Apart.	Distance Inland	Caste.	Jurisdiction.
	Villages on the left bank.				
3rd	Sirdárpur,..	2	2	Joyce,..	Tufuri.
	Joyce,.....	1	1	ditto, ..	litto.
	Lál-ke Jok,	1	..	ditto, ..	ditto.
	Jok dúsra,..	1	1	Dáudpotra and Játs,..	litto.
	Sherpur, ..	½	1	ditto, ..	litto.
	Ghaus Joyia,	½	½	ditto, ..	ditto.
	Jamál Joyia,	¾	¼	ditto, ..	ditto.
	Kúkari, ...	¼	½	ditto, ..	litto.
	Muttali, ..	½	1	ditto, ..	litto.
	Pipalli, ...	½	..	ditto, ..	ditto.
	Sher Mahamad Khán.	½	..	ditto, .	ditto.
	2nd Mattali,	½	..	ditto, ..	Khairpur
	Durpur,....	1	½	ditto, ..	ditto.
6th	Wásti Mowlvi-ke, ...	1	½	Mixed,	ditto.
	Wágé, ...	½	¼	Wagi,..	ditto.
	Gamu walur,	¾	¾	ditto, ..	ditto.
	Goth Bahúdúr, ...	1	1	Dáudpotra, ..	ditto.
	Kálá Ahul,	1	½	Andu,..	ditto.
	Mithi de Goth, ...	½	½	Sayad,..	ditto.
	Gouhan.....	1	½	Beloch,	ditto.
	Goth Morád Khán, ...	½	1½	Dáudpotra, ..	G.N.M.
8¼ kos.	Goth Ali yár Khán, ...	½	1½	ditto, ..	ditto.
	Bhundi, ...	½	1½	ditto, ..	ditto.
	Dera Puttonka, ..	½	1½	Beloch,	ditto.
	Goth Núr Mahamad,	1	½	Dáudpotra, ..	ditto.
	Villages on the right bank.				
	Pír Imám Din, ...	1	..	Sayáds,	Malsián.
	Malik Wáhun,..	2	2	Wasseir,	ditto.
	Azímpur, ..	2	..	Beloch,	ditto.
	Ahmadpur,	¼	..	Of Belochorigin, ..	ditto.
	Qázi Mahamad.....	¼	1	ditto, ..	ditto.
	Motádpur,..	1	..	litto, ..	ditto.
	Ghauspur,..	1	..	Mixed tribes and Ját,	ditto.
	Fattehpur,.	1	½	ditto, ..	ditto.

N. B.—B. for Badhourn. I. S. for Imám Sháh. G. N. M. for Goth Núr Mahamad.

Length of Stages and date.	Names of Villages.	Distance kos. Apart.	Inland	Caste.	Jurisdiction.
	Kádirpur, ..	½	1½	Mixed tribes and Ját,	Malsián.
	Chela Wáhun, ...	1	1½	ditto, ..	ditto.
	Kutabpur, ..	2	1	ditto, ..	ditto.
	Bahádur, ..	1	1	Wage,..	K.
	Wásti Mirúdi, ...	1	1	Mohar,	ditto.
	Sháh Abú Zálim, ...	1	1	Usra Ját, ..	ditto.
	Dera Lallede, ...	1½	1	Beloch,	ditto.
	Wásti Hasil Beloch,....	¼	..	ditto, ..	ditto.
	Dost Mahamad-ke, ..	1	1	Dáudpotra, ..	ditto.
	Moze Vazir Beloch, ..	½	½	Beloch,	ditto.
	Moze Allayár, ...	½	½	ditto, ..	ditto.
	Villages on the left bank.				
7th. 5¾ kos.	Goth Sháh Mahamad,	½	½	Dáudpotra, ..	G.N. M.
	Goth Rústam Khán, ...	½	½	ditto, ..	ditto.
	Do. Ibráhim Khán, ...	½	½	ditto, ..	ditto.
	Wásti Jindú,	½	½	Khaddun, ..	ditto.
	Jhulam,.....	½	1	Jhulan,	ditto.
	Shahar Badda,.....	¾	½	Beloch,	ditto.
	Lál Sahara,	¾	½	Kuriesha, ..	ditto.
	Phul...	¾	½	Phul, ..	ditto.
	Morád Ali,..	¾	¾	ditto, ..	ditto.
	Moze Ram,	½	½	Ráin, ..	ditto.
	Lalú Wásti,	½	½	Sarruke,	ditto.
	MadAlla yar,	½	½	Dáudpotra, .	ditto.

Length of Stages and date.	Names of Villages.	Distance kos. Apart.	Inland	Caste.	Jurisdiction.
8th. 4½ kos.	Dera Backa,	½	½	Beloch,	D. B.
	Dera Gúl dí,	¼	1	ditto, ..	N.
	Bilgani, ...	¼	1	ditto, ..	ditto.
	Mir Qásim Sháh, ...	1	1	Karwar,	ditto.
	Mujal, ...	1	½	Majal,.	ditto.
	Ka-ra, ...	1	1	Kasra,	ditto.
	Ahsam, ...	¼	1	Ahsam,	ditto.
	Gidpura, ..	¼	1	Jovee,..	ditto.
	Rattani,....	¼	1	Dáudpotra, ..	ditto.
	Bákarpur, ..	¼	1	Channur	B.
	Villages on the right bank.				
	Moze Dera Delawar,..	1	1	Beloch,	Kehore.
	Wigha Mal,	¼	¼	Wigha Mal, ..	ditto.
	Gúl Mulhana	¼	¼	Mulhani	ditto.
	Bahádur,..	¼	¼	Wigh,...	ditto.
	Sukar, ...	¼	¼	Seekar,	ditto.
	Kúl, ...	¼	¼	Kúl, ..	ditto.
	Phul, ...	¼	..	Phul, ..	ditto.
	Jans, ...	1	..	Waggan	ditto.
	AhurWahun.	1¼	..	ditto, ..	ditto.
	Kotli Murad Ali, ...	¼	..	Beloch,	ditto.
	Wea, ...	¼	..	Chattie,	ditto.
	Gúlám Mahamad,....	¼	..	Chawan,	ditto.
	Moze Kuttabú,.....	½	..	Daultána, ..	Kehore.
	Ahsam, ...	¼	¼	Ahsam,	ditto.
	Hasilwálá, .	1	½	Kausa,	ditto.
	Nierwáhan,	1	1	ditto, ..	ditto.
	Doaána,....	2½	½	Oojare,	ditto.
	Wásti Beloch-ke...	½	..	Beloch,	S.
	Jhok Taka,	¼	1	ditto, ..	ditto.
	Stikri,.....	2	2	Channur, ..	ditto.
	Guze Lahunwala, ..	1	1	ditto, ..	ditto.

From Bahawalpur to Mithankot by the Rivers Gharra, Punjnad and Indus.

Villages on the left bank.

Feb. 25th 11¼ kos.	Goth Bajun Khán-ke,..	½	½	Beloch,	B.
	Goth Mulla Ghanni, ..	½	½	Dáudpotra Gusani, ..	ditto.
	Jawarwáli,	..	½	Ját Chunnar, ..	L.
	Khanawáli,	½	¼	ditto, ..	ditto.
	Bú Áziwah.	1	1½	ditto, ..	L.
	Kaen Hayett,	..	1	ditto, ..	ditto.
	Bhuchar, ..	..	1½	ditto, ..	S. M.
	Goth Ghanni Khán, ...	½	¼	Dáudpotra pirjani, ..	ditto.
	Rowtana, ...	..	½	Konar Jar, ..	ditto.

N. B.—K. for Kutabpur. D. B. for Dera Backa. N. for Nezamwah. B. for Bahawalpur. S. for Sirdárwah. L. for Lallapur. S. M. for Sirah Mustie.

Length of Stages and date.	Names of Villages.	Distance Apart.	Distance Inland kos.	Caste.	Jurisdiction.
3 kos. 26th.	Sammú Satta,.....	1	½	Koliar Ját, ..	S. M.
	Wásti Muhabbat-ke,	1	1	Gurwan Ját, ..	ditto.
	Bhaddi, ...	¾	1	Uttera Ját, ..	Kutab.
	Eesan, ...	1	¾	Mutha Ját, ..	ditto.
	Aman Sháh,	¼	½	ditto, ..	ditto.
	Naharwáli,	½	¾	Ghallor Ját, ..	K. D.
	Kot Dadú Gallu, ...	½	2	Gallu Ját, ..	M.
	Muhabbatpur, ...	¾	1	Dáudpotra, ..	ditto.
	Abdullapur,	..	¼	Jovce Ját, ..	ditto.
	Guzr Banh,	..	¼	ditto, ..	ditto.
	Khokar,.....	..	¼	ditto, ..	ditto.
	Bhammú, ..	..	¼	ditto, ..	ditto.
	Mallikwall,	..	¼	ditto, ..	ditto.
	Mallik Sikandar,....	..	¼	ditto. ..	ditto.
	Gallú,.....	2	¼	Gallá Ját, ..	ditto.
	Pipli kanjanke, ...	¼	¼	ditto, ..	ditto.
	Alliwáhun,	..	1	ditto,	A.
	Phagwára,..	½	1	ditto, ..	ditto.
	Uthwál,....	..	½	ditto, ..	ditto.
	Kabbul,....	..	¼	ditto, ..	ditto.

Villages on the right bank.

	Miani, ...	..	½	Ját Tuhi,..	A. W.
	Wásti Abádke,.....	1	½	JátChunar, ..	ditto.
	Kikri,.... ..	1	½	ditto, ..	ditto.
	Wásti Tseke, ...	1	¾	Koliar Ját, ..	ditto.
	Do. Gholam Mahamad,	½	½	ditto, ..	ditto.
	Badhi, . ..	½	½	ditto, ..	ditto.
	Kallar wah,	1	½	Puckawar, ..	ditto.
	Baghowali,	1	1	Koliar Ját, ..	ditto.
	Batta Kotla,	¾	½	ditto, ..	K.
	Sodra, ...	½	1	Dáudpotra, ..	ditto.
	Hyatpur, ..	..	½	Koliar Ját, ..	ditto.
	Wásti Bijrans de, .	..	½	Uttera,	ditto.
	Yaruka chack, ...	¼	¼	Rutta Já', ..	Kotla.

Length of Stages and date.	Names of Villages.	Distance Apart.	Distance Inland kos.	Caste.	Jurisdiction.
10 kos.	Othwal, ...	1	½	Sarru Ját, ..	Kotla.
	Motthi, ...	1	1	Sarru,..	ditto.
	Kotla Chakar, ...	1½	1	Motha Ját, ..	ditto.
	MozaSultan,	1½	¼	ditto, ..	ditto.
	Goth Qádirbakhsh, ..	1	¼	ditto, ..	ditto.
	Kotla Sháh Rupul, ...	1	½	Kanjun Ját, ..	ditto.
	Kikkarwáli,	1	¼	ditto,	ditto.
	Wásti Sherke,.....	¼	¼	Goriyá,	ditto.
	Wásti Husain-ke, ..	½	¼	Jubul,..	ditto.
	Batton, ...	2	1	Khinevon, ..	ditto.
	Jhitthewálá,	2	¼	ditto, ..	ditto.
	Murun Jiwá á,....	2	¼	ditto, ..	ditto.
	Pathana, ..	1	¼	ditto, ..	ditto.
	Wasti Bharike,.....	1	¼	Ghallu,	ditto.

Villages on the left bank.

	Kanúwálá,..	1½	1	Ghallu Ját, ..	A.
	Ghallu, ..	..	½	ditto, ..	ditto.
	Behli Wahálke, ..	½	¼	ditto, ..	ditto.
	Jundwadda,	½	¼	ditto, ..	ditto.
	WástiShakar Khán, ..	½	¼	ditto, ..	ditto.
	Ismailpur,..	½	¼	ditto, ..	ditto.
	Wásti Mahamad Khán,	1	¼	Dáudpotra, ..	ditto.
	Goth Kheir Khán, ..	¼	¼	ditto, ..	ditto.
	Goth Alam Khán-ke,..	¼	¼	Ghallu,	ditto.
	Jhangra. ..	1	¼	ditto, ..	Jhangra.
	Kissamwálá,	¼	1	Husain Ját, ..	ditto.
	Moza Dahar,	1	½	ditto, ..	ditto.
	Mirpur, ..	¼	½	Khukki,	ditto.
	Kirree, ...	¼	2	ditto, ..	ditto.
	Jumewáli, ..	¼	2	Beloch,	ditto.
	Kot Imám Din ..	¼	¼	ditto, ..	ditto.
	Moza Bakar,	¼	½	ditto, ..	ditto.
	Bakra, ...	1	1	Punnu Já', ..	Bukru.
	Jiendwá á,..	2	1	Beloch,	ditto.
	Chunhan, ..	¼	2	Kohjle,	ditto.
	Rassúlpur,	¼	2	ditto, ..	ditto.
	Guzr Makhanbela, ..	¼	1	Beloch,	ditto.

N. B.—K. D. for Kot Dada. M. for Mubárikpur. A. for Alliwáhun. A. W. for Adam Wahan-ke. K. for Khán wah.

Length of Stages and date.	Names of Villages.	Distance kos. Apart.	Distance kos. Inland	Caste.	Jurisdiction.
	Villages on the right bank.				
	Jumma Ghaltu, ..	¼	¼	Ghallu,	U.
	Gaggúwálá,	½	½	ditto, ..	ditto.
	Bahúwáta,..	¼	¼	Khunb,	ditto.
	Lal Jubul,..	¼	¼	Ghallú,	ditto.
	Miani, ..	¼	¼	Jabeil,	ditto.
	Sharifwáli,..	¾	¾	Ghallú,	ditto.
	Bakhuwali,	1	1	ditto, ..	ditto.
	Jablá. ..	2	2	ditto, .	ditto.
	Moza Puckawar,	1½	¼	ditto, .	ditto.
	Duggar, ..	1	½	ditto, ..	ditto.
	Skirance, ..	1½	¼	ditto, ..	ditto.
	Miani, ..	1	¼	ditto, ..	ditto.
	Kaddú Jhujan ..	½	1	ditto, ..	ditto.
	Sheir Khán		¼	ditto, ..	ditto.
	Noraja, ..	1¼	½	ditto, ..	ditto.
	Mumú Jabeil. ..	½	½	ditto, ..	ditto.
	Arra, ..	1	1¼	ditto, ..	ditto.
	Barkhúrdár Jabeil. ..	1	⅕	ditto, ..	ditto.
	Ubhawári,..	2	1	ditto, ..	ditto.
	Saiful, ..	1¼	⅕	ditto, ..	ditto.
	Suleimán, ..	1¼	⅕	ditto. ..	do to.
	Pahálpur,	⅘	⅘	ditto, ..	ditto.
	Langur,....	1	⅘	ditto, ..	ditto.
	Háfiz Abdul Rahim, ..	1	1	ditto. ..	ditto.
	Langáh, ..	1	1	Langáh,	K.
	Haveli Hinduán,..	2	¼	Hindu,	ditto.
	Pabban, ..	1	1	Rukh,..	ditto.
	Shirni, ..	⅕	1	ditto, ..	ditto.
	Benth Músaka, ..	⅕	1	ditto, ..	ditto.
	Dhammur,..	⅕	1	Dhammur,..	ditto.
	Chun Jan,..	2	1	Chunjan	ditto.
	Mongh, ...	1	1	ditto, ..	ditto.
	Azmuth.....	1	2	Punnu,	Ghalluán
	Bálí, ...	1⅕	1	Mulun,	ditto.
	Villages on the left bank.				
	Moza Lál, ..	2	2	Beloch,	Uch.
	Mahamad Khán.	2	2	ditto. ..	ditto.
	Wásti Durgochree, .	2	2	Dargoch ree, ..	ditto.
	Miani,.....	2	2	Muncharri	ditto.
	Jhallan....	1	1	Jhulian.	ditto.
	Núrwá. ..	1		ditto, ..	ditto.

Length of Stages and date.	Names of Villages.	Distance kos. Apart.	Distance kos. Inland	Caste.	Jurisdiction.
	Moza Malong,.....	1	1	Malung,	Uch.
	Khori,.....	..	1	Bhuttan	ditto.
	Thul Mastuwá,.....	..	2	ditto, ..	ditto.
	Moza Phirandi,.....	..	2	Phirandi	ditto.
	Moza Abid.	..	1	ditto, ..	ditto.
	Wásti Ibráhim Mullah,	..	½	Mullah,	ditto.
	Jhoki Jafar Sháh-ke, ..	..	½	ditto, ..	ditto.
	Hontah, . ..	1	1	Mullah,	ditto.
	Káim Unnar.	½	1	Unnar,	ditto.
	Wazwai,....	½	1	Wagwai,	ditto.
	Chuvoun, .	..	1	Chuvoun	ditto.
	Bakhu Khanda Mad, ..	1	1	Dabar,	Sheidané
	Wagwan, ..	1	2	Wagu,..	ditto.
	Súmú-ka, ..	2	2½	Súmáka.	S ka.
	Kehul, ...	½	2	Kehul, .	ditto.
	Moghal, . .	1	2	Mahar,	ditto.
	Chachar,....	..	1½	Chachar,	G.
	Villages on the right bank.				
	Moza Hassú Massú,....	1	2	Beloch,	Ghalluán
	Mahamad Kh n, ...	1	1	ditto, .	ditto.
	Sáwanwali,	1	1	Mullah,	ditto.
	Sitpúr, ...	2	1	ditto, ..	Sitpúr.
	Jhullan, ...	1	2	Jhullan,	ditto.
	Khágarh,..	1	1	Uttú,	ditto.
	Moza Bhattar,..... ..	1		Bhattar,	ditto.
	Khánpur, ..	1	2	Indre, ..	ditto.
	Kot Alla Yár Mahamad ..	½	1	Purrai,	ditto.
	Moza Pannú,	2	1	Pannú,	ditto.
	Thoba, ...	1	1	Utteru,	ditto.
	Wasti Nandan, ...	1		Jhullan,	ditto.
	Wasti Soneke, ...	1		Bhuttur,	ditto.
	Mud Lashkari, ...	1		Jhullan,	ditto.
	Dohar, ...	½	1	Dahar,	B.E -ka.
	Duaka, ...	1½	2½	Hindu,	Dhako.
	Lang.	½	½	Lang.	ditto.
	Thattar, ...	1	1½	Thattar,	ditto.
	Wasti Yasandi.		2	Beloch Gopang	ditto.
	Post Mahamad Ekra,	½	½	ditto. ..	ditto.
	Thambur. .	½	½	Mehar.	ditto.
	Post Mithan,	3	2	deloch,	M.

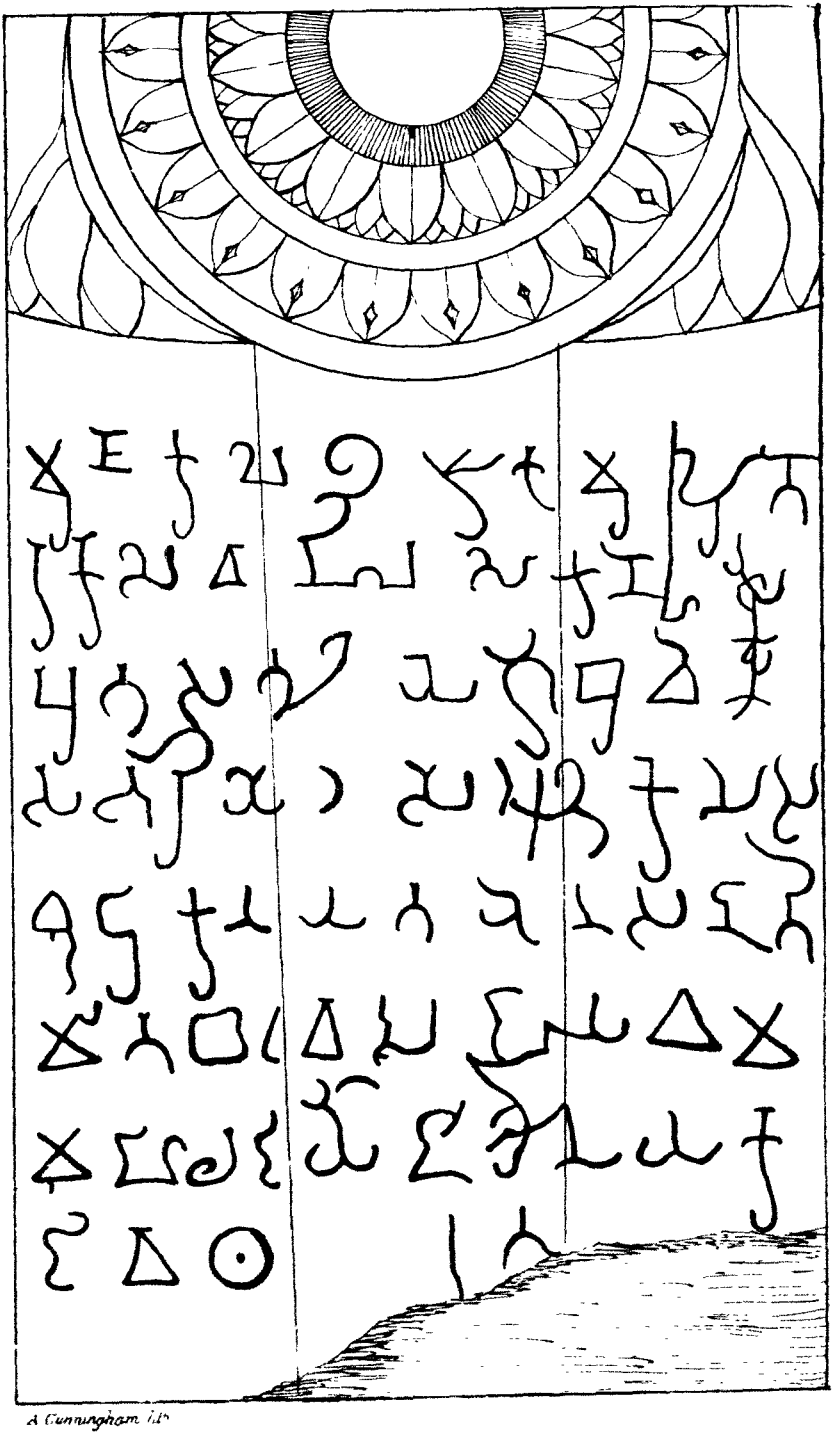
N. B.—U. for Udhawara. K. for Khanbela. S.-ka for Súmú-ka. G. for Ghansur. B. E-ka for Benth Esá-ka. M. for Mithankot.

III.—*Facsimiles of Ancient Inscriptions; continued from page* 97.

In the library of the Asiatic Society are ten manuscript volumes of drawings of sculpture, images, architecture and inscriptions, forming part of the celebrated collection of the late Colonel MACKENZIE. The greater portion of these are as yet unknown and undescribed. None of the series, as far as we can ascertain, have been published, nor are we aware of any attempt having been made to decypher the inscriptions. It is greatly to be wished that the whole of these interesting documents could be digested in some convenient arrangement and made accessible to the learned world, especially now that the invention of lithography offers a cheap and expeditious means of effecting such an object. We were in hopes of combining their publication in the form of a volume or two of plates, with the digest of the MACKENZIE manuscripts, which, at the recommendation of the Society, the Government has lately entrusted to the Rev. W. TAYLOR at *Madras*, the author of "Oriental Historical manuscripts." As a specimen of the contents of these curious volumes, Captain CUNNINGHAM has kindly favored me with the two lithographs numbered as Plates X. and XI. He has selected the two longest inscriptions from the volume, No. 18, entitled "Antiquities at *Amarávatí*," a town in the *Berár* province, situated on the *Kistna* river to the west of *Nágpur*.

The volume in question contains a multitude of very beautiful drawings of the elaborate sculpture for which the ruins at that place are so remarkable. One of the slabs of stone, depicted among the rest, now forms a principal ornament of the Society's museum, and the execution of the lively scene it represents has been frequently and deservedly admired. The majority of the sculptures of *Amarávatí* seem to belong to a magnificent *dehgopa* or Buddhist shrine; but there is an admixture towards the end of the volume of objects of the linga worship. An accurate map of the town is prefixed, whence it appears that the ruined *dehgopa* whence the relics are taken was on a mound of 150 feet diameter, now converted into a tank. It is called *Dipaldinna*, (translated by Colonel MACKENZIE "the mound of lights,") which so resembles the name of a similar place of Buddhist celebrity in Ceylon (*Dambadinna*) that we imagined, on seeing the inscription from the east side of the gateway (Pl. X.), some mistake must have been committed; for on comparing the characters with Plate XXVIII. of the Journ. As. Soc. vol. v. p. 554, their perfect identity with the Ceylonese type of old Nágarí was manifest: indeed the three initial letters appear to form the same word "*mujikè*" . . . and the same combi-

FACSIMILE OF AN INSCRIPTION on the East side of the S. Gateway OF DIPALDINNA AT AMRAWUTTY.



A. Cunningham del.

nation there recognized as "*Mahárája*" .... drew Captain CUNNINGHAM'S attention while copying the penultimate line of the present inscription. No doubt the whole of this class of cave and *chaitya* inscriptions are intimately connected, and refer to the same age; and however illegible now, they will ultimately yield to the persevering progress of antiquarian research.

The second inscription, occupying the two sides of Plate XI. is altogether of a different class, although the book states it to have been procured from the same town, *Amarávatí*. In WILSON'S catalogue of the MACKENZIE MSS. vol. ii. page XXVII. we find notice of a "report of the progress of *Anund Ráo* (one of the *Colonel's* travelling collectors) on his journey in the *Dharanikota*, *Amarávatí*, and *Bender* districts in the Telugu country for the year 1817." This would, doubtless, afford all the requisite information respecting the discovery and position of the fragment, were the report in our possession; but it seems to have been sent to *England* with the bulk of the manuscripts, and thence probably it has found its way to *Madras*. Should this be the case we shall not appeal in vain to the Editor of the *Madras Literary Journal* to supply us with any extract that may throw light on the subject.

The stone is noted down as 5 feet long by 17 inches in width. It is in very good preservation, as far as it goes, but the loss of the left half of the summit, and the fracture at the lowermost line, render it doubtful how much of the text may have preceded or followed that which remains.

The character has much resemblance to that of some of the cave inscriptions at *Mahábalipur* and other places to the westward, the essential portion of each letter also assimilates very closely to the alphabets of the *Chattisgarh* and *Seoní* inscriptions, and this has served as the key by which I have effected the transcription of the whole.

It is worthy of remark, that in this alphabet, which we may aptly denominate the *Andhra* character from its locality, may be traced the gradual transition from the more simple Devanágarí of Northern India, (No. 2 of *Allahabad*, *Gaya* and *Guzerat*) to the complicated or florid writing of the Southern Peninsula. On comparing it with the *Hala Canara*, or ancient *Carnatic*, the letters *n*, *t*, *y*, *r*, *l*, *kh*, *th*, *dh*, *bh*, which may be regarded in some degree as test letters, because they have undergone more variation than others in the modern writing of different provinces, are nearly identical. There is also an incipient loop in the lower line of many of the letters which becomes afterwards more developed in the west and south. The *Telinga* or *Telugu* character

is one step further removed, but it springs directly from the *Hala Canara*, and retains many of the *Andhra* letters still unchanged, particularly the *dh* and *th*. In the accompanying plate (XII.) we have thought it worth while to exhibit these resemblances, and point out the peculiarities noted, that no means may be neglected of facilitating the examination of other inscriptions that may link on naturally at either end of this fragment of the chain of our Indian palæography.

After having made the transcript according to the assumed value of each letter, it was revised and corrected in all doubtful points by reading it over with MA'DHORA'Y* pandit, the aged librarian of the Sanskrit college, who, from having been with Colonel MACKENZIE, is better versed in the varieties of the Nágarí alphabets than any pandit in *Calcutta*. Where the context did not make sense, the letters were carefully analyzed and all possible variations of each letter suggested, until the true or most probable reading was apprehended. Although some few doubtful passages remained, and many orthographical errors were detected, the context was sufficiently intelligible, and satisfactory. In some few instances (as in lines 6, 8, and 17) the distinguishing stroke or dot of the letter *n* has been omitted either by the sculptor or by the transcriber. The omission can be supplied without hesitation, as no other letter occurs at all similar in form. The cross of the *k* in lines 7 and 8 is also wanting.

For the translation we are indebted to the Rev. Mr. YATES, whose critical knowledge of the Sanskrit enables him to give it the correct grammatical construction which might evade an oral interpreter depending upon a vernacular explanation by the pandits.

Transcript of the Amarávatí Inscription.

1 .. ये नार्या अतोर्त्थि भुदेवता अ ..

2 .. रेणा वा माहकाधरेणा वा शीलवता

3 .. र्मरिपालनोय पिवरपिण्डघात भयनास

4 कर्त्तव्यं आत्र विनयाभिधर्म्मपाधखे भिक्षु..

5 रात्रि कामावत्तिमापन्नेन नवस्तव्यं संघावशेष..

6 न्यथा प्रति द्यादेसति नवस्तव्यम् संघाय दान

* It was MA'DHORA'Y who aided Captain TROYER in the *Allahabad* inscription, J. A. S. vol. ii.

7 टंक दातव्यं श्रीलसम्यन्नेभ्योश्रमरश्रेभ्यः पि (धा)

8 तव्य धर्म्मकथिकाय त्रिगुणो लाभः वोद्यतार्रिक

9 स्य सोवस्थानन्नदातव्यं सद्धर्म्म लेखकाय द्विगुणोला (भः)

10 घटसपरार्द्धय मासम्मति मासम् पुः

11 नुलेपनैः वैशाख पुर्णामास्याम्भिश्रेष ....

12 प्रतिटचकेन परिचारेणा भवितव्यं इति घ ....

13 मात्रादिकस्य वामम पुण्यराशेर्भा गो भ

14 र्द्धघातक पिटघातक सुर्हृद्घातक देवद्विज

15 महापाप कारिणां तत्चियेन परिवाठयन्ति....

16 (रा) ज्ञा संघसन्मीठनं ज्ञत्वा महाघोराग्निः प्र ....

17 राजवत्मिचबुद्धस्य शासनं लोकशासनं सोभ ....

18 लम्बशाखो शासनवृद्धश्चिरं स्थातु ॥ स्थातुबि ..

19 समग्रा सर्व्वाबलोका सुखीभवतु ॥ याव

20 ब्यिपितरं प्रप्रबलितमकरध्वेभिताम् बस्म

..... धवद ... दि तं.....

The few alterations found necessary by Mr. YATES will be best understood from the insertion of his reading at length : we may however here notice one or two peculiarities or faults of orthography remarked by the pandits. The *r* of धर्म्म in line 8 is written thus, धरम्म :—the word सुहृद, friend, in line 14, is written *Surhhad* with a double *h*, and the *r* superposed :—The *anuswara* is often replaced by the म् at length : the ज्ञ is a compound letter formed by suffixing ञ to ज ; and the च is in like manner formed by the union of the क and the ष, as is observable in other old alphabets, proving that these anomalies to the otherwise beautiful and perfect arrangement of the Sanskrit alphabet, are of comparatively modern introduction.

The purport of the inscription refers, in all probability, to the foundation and endowment of some Buddhistic institution by the monarch of the day. His name cannot be extracted from the passages extant. It is evident, therefore, that history will gain nothing by the

document;—nor can any of the loose chronicles of the Hindu dynasties of *Telinga* or the *Carnatic* be expected to throw much light upon the period when *Amarávati* was subject to their hated opponents, the followers of the *Buddhist* creed.

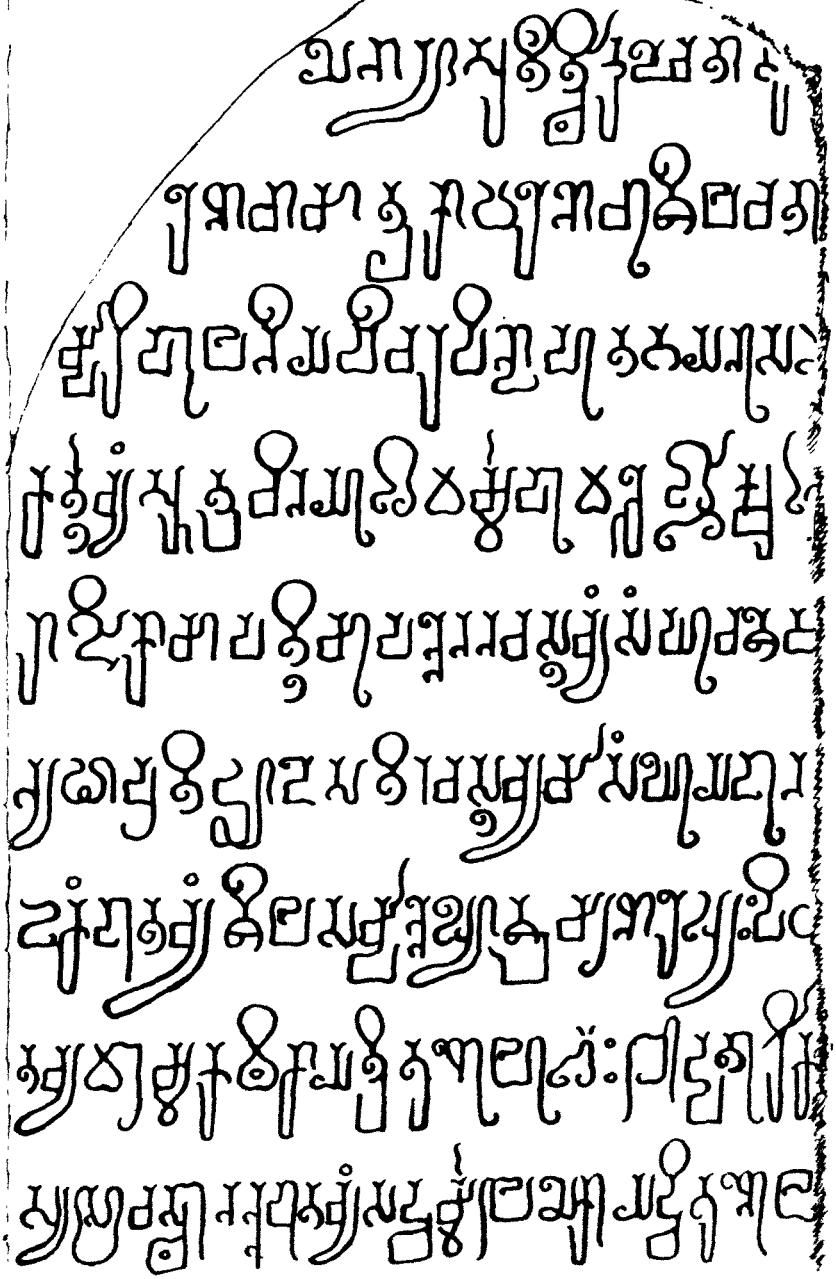
Modified Transcript by the Rev. W. YATES.

येनार्य्यातिथि भूदेवता धुरन्धरेणबामाद्दकापरेण वा शीलवता स
म्परिपालनीय पोवर पिण्डघात भयनाशनं कर्त्तव्यं।
यत्र विनयाभिधर्म्मबाधके भद्दके राज्ञि कामापत्तिमापन्नेन नवस्तव्यं।
संघावशेषेऽन्यथाप्रतिवादे सति न वस्तव्यं।
संघाय दानकं दातव्यं: शीलसम्पन्नेभ्यः श्रमणकेभ्यः पिण्डं दातव्यं।
धर्म्म कथिकाय त्रिगुण लाभः ।
वोद्दतार्किकस्य स्वस्थानं नदातव्यं।
सद्धर्म्मलेखकाय द्विगुण लाभः सद्दाशयराजाय मासं प्रति मासं
पुष्पानुलेपनै र्वैशाख पौर्णमास्यां विशेष घट प्रतिष्ठाद्दकेन परिवारेण भवितव्यं।
इति मात्रादिकस्य वा मम पुण्यराशेर्भागः भर्त्तृघातक पितृघातक सुहृद्घातक
देवद्विजमद्दापापकारिणां तत्तु। ये न परिपालयन्ति राजानः संघसञ्छेदनं
श्रुत्वा मद्दाघोराग्निः पुण्यराज्यवर्त्तिद्दवृद्धस्य शासनं।
लोक शासनं शुभमस्तमभंग्नःखे शासन दृढस्थिरं स्थाता।
स्थातुं च समन्तात् सर्व्वेच लोकाः सुखीनो भवन्तु।
यावद्दीचीतरङ्गप्रचलितमकरचोमिताम् भूसम।

Translation.

(Two words omitted here as belonging to something before). ——— By the virtuous man who relieves the guest and the bráhman, and who is kind to parents, the fear of necessary food ought not to be entertained. He who experiences disappointment near a king feasting with even the mild opposers of virtue, ought not to abide there, nor ought he to abide where injustice is practised. We ought to give to all. Food ought to be given to the laborers who are virtuous. Three-fold gain should be given to the speaker of truth. Place is not to be given to the disputer of Buddhism. Two-fold gain should be given to the teacher of religion. To the good king tribute must be paid monthly with flowers and perfumes, and on the full moon in the month Vaishakha he ought in particular to be presented with the jar. My virtue and that of my ancestors is for the salvation

COPY OF AN INSCRIPTION
FROM AMRAVATI
COL MACKENZIE'S MSS



Drawn by Capt. Cunningham

Comparison of the Amaravati character with other alphabets

	Allahabad	Nerbudda	Kistna	Canara modern	Telinga modern
k					
kh					
g					
gh					
ng					
ch					
chh					
j					
jh					
ny					
t					
th					
d					
dh					
n					
p					
ph					
b					
bh					
m					

Gutturals

Palatials

Lingual

Dentals

Labials

	Allahabad	Nerbudda	Kistna	Canara modern	Telinga modern
y					
r					
l					
v					
ś					
sh					
s					
h					

Sibilants

compounds

ksh					
jn					

Initial and medial vowels.

a					
á					
i					
í					
u					
ú					
e					
ai					
o					
au					

Vowels

ká				kai	
ke				kau	
ki				kí	
ku				kú	
ko				kr	

Consonants

Form.	ye	ño	sú	rtt	mm	rbh	ryá	sy	khe	ji	rth	jn	:

J. Prinsep lith.

Printed at the Oriental Lith. Press Calcutta.

of murderers of husbands, murderers of fathers, and murderers of friends, and of those who have committed great sins against the gods and brâhmans. The kings that do not regard this kingdom preserving religion of BUDDHA, shall by it be cut off with all their family and perish in a flaming fire. May this very excellent religion of the people resembling a tree, remain in heaven for ever, and may people in all directions through its remaining, be happy as long as the sea continues to be agitated by marine monsters.....

IV.—*Note on a Specimen of the Bos Gaurus. By Dr.* GEORGE EVANS, *Curator of the Medical College.*

[We are indebted to Lieut. G. ABBOTT, 15th N. I. for the faithful lithographic representation of this skull in Pl. XVI.—ED.]

As I have reason to believe that very little is known of the *Gaur (Bos Gaurus)*, or the animal generally considered by our Indian sportsmen as the Bison of the Indian forests and jungles, and thinking it might prove interesting, I have sent for the inspection of the Members of the Asiatic Society, who may be present at the next ensuing meeting, an exceedingly fine cranium of one of these very rare animals, which has recently been presented to me by a gentleman residing in the *Sambhalpur* district.

For want of good and select specimens of heads of the genus *Bos*, I am unable to offer any valuable remarks drawn from comparative observation of the osteological structure, so as to determine with anatomical precision whether it actually belongs to the Bisontine or Taurine group of the genus. I am, however, inclined to assign it to the latter, or otherwise to consider it as an intermediate species connecting the two divisions with each other; and what would seem to favor this intermedial arrangement, is its differing from both in some very essential points, and again corresponding with each in many of its generic relations.

In the present specimen, which is that of an old male, the forehead is deeply concave, broader than high, (taking the middle of the orbits as the base,) having a strong scabrous arched crista at the summit of the head, where it joins the parietal bone, to which it is firmly accreted: from this and the lateral parts of the frontal bone, a little above the declension of the orbits, proceed strong, thick-set and gently recurvent horns, the points turning towards the face. The orbits are remarkable for their lateral projection from the body of the

os frontis, in which respect the animal bears a marked resemblance to the Cervine race, as also by the pointed form of the nose, both which tend to give a peculiar character and wedge-like form to the head and face. There is also a deviation in the sudden termination of the full labial bones in their progress to the ossa nasi, which I do not observe in the heads of any of such of the domestic species as I have had an opportunity of examining; or even in those of the several buffaloes in my possession, their attachment being exclusively confined to the superior maxillary bones, without having any connection with those of the nose, which latter are large, broad and well arched, affording a very extensive chamber for the free passage of air, and also for the full expansion of the organ of smell. From this conformation I make no doubt that the animal is capable of enduring long-continued exertion: is possessed of exquisite scent, and that the intonations of the voice are thereby rendered deep, hollow and sonorous. In short, the whole formation of the head of this colossal bull appears to correspond with that of the fossil *Urus* found in different parts of Europe, and it unquestionably displays a vast extent of power to defend and assault, combined with great personal courage and precision in attack; and I have no doubt that he must often prove a most formidable antagonist to the tiger, the wild buffalo, and other tenants of his geographical range.

In looking over the different crania in the Society's museum, I find an imperfect skull (merely horns and forehead) marked "*Gaur*," which agrees with my specimen only in the shape of the horns, but the forehead is rounded as in the buffalo, and not cristated as in my specimen, which I look upon to be the true *Gaur* (*Bos Gaurus*) confined to the more sequestered and elevated tracts of Central India; and the above mentioned, that of the *Gayal* (*B. Gavæus*), wanting the occipital ridge, and dispersed more about the mountainous districts of the eastern provinces, unless indeed it prove to be the female of the one here described: but the propriety of classing even this and the *Yák (Bos Poephagus)* with the Bisons, may be questioned if external similitude has alone led to the arrangement. The only true standard for settling their mutual affinities and establishing their right to be included under the one or the other of the *artificial* divisions, which the difference observable in animals of the same genus, constituting varieties, has compelled naturalists to resort to, would be a strict inquiry into their individual osteological peculiarities, placing those under the Bisontine group, which, corresponding pretty generally in their external characters with each other, have, like the American Bison

fig. 1

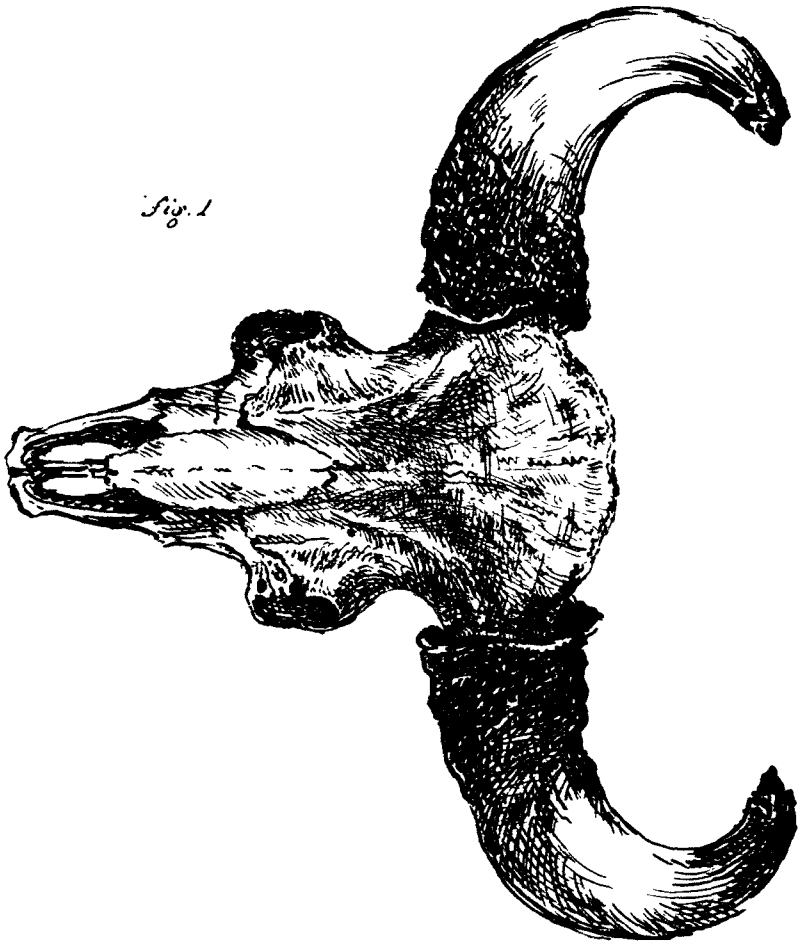
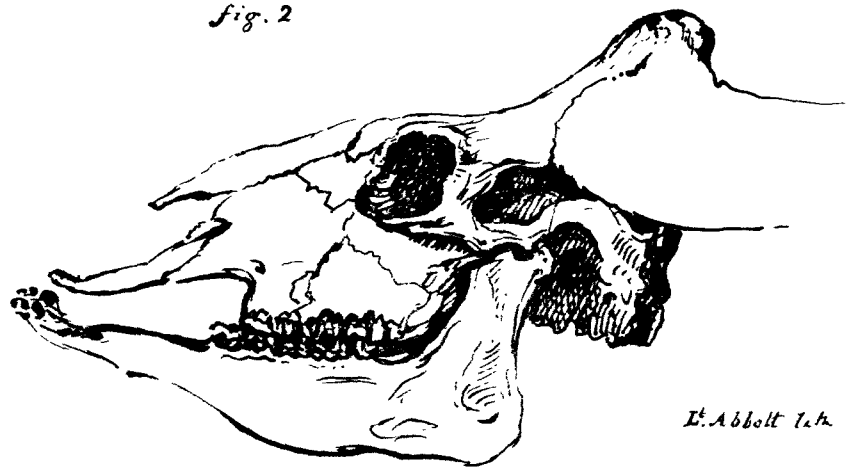


fig. 2



Lt. Abbott lith.

(*B. Americanus*), the type of the existing species, fifteen pairs of ribs—those with fourteen pairs, the intermediate link, to which the two above varieties and the *Yák* would most probably belong—and those with only thirteen pairs should be considered as the true Taurine which would include all our domestic kine.

Measurement of the Gaur's head (B. Gaurus) compared with the up-country bullock and the wild buffaloe.

	Gaur.		Up-count. Bullock.		Wild male Buffaloe.	
	Ft.	In.	Ft.	In.	Ft.	In.
Length of the head from the tip of the nose to the summit of the crista,	1	11.3	2	0.0	2	0.0
Breadth of the occipital ridge between the roots of the horns,	0	10.5		7.5		5.0
—— across the forehead at the greatest projection of the orbits,		10.0		8.2		10.5
—— at the narrowest part of the forehead,		8.5		6.4		8.2
Depth of the occipital plane, from the great foramen to the top of the crista,		9.0		4.2		6.0
—— of the superior maxilla from its junction with the nose of the alveolar edge of the molar tooth,		5.7		5.5		7.0
Breadth of the nasal fossa,		3.7		2.7		3.5
Height of do. from the palatine bone,		3.5		3.0		3.3
Length of the horn at its greatest curvature,	2	0.3		10.7		?
Circumference at its base,	1	4.2		7.1		?

V.—*Memorandum on the Gaur and Gayal. By Assistant Surgeon* J. T. Pearson, *Cur. Mus. Asiatic Society.*

At the last meeting of the Society a paper was read, purporting to be a notice on the head of the *Gaur*, by Mr. Evans. In that paper the author stated that he went into the Museum of the Society and found a specimen, consisting of the horns and part of the skull of a bovine animal, marked "*Bos Gaur*," but which in reality belonged to the *Gayal*, another large animal of the same group, a native of the forests of *Chittagong*. It may be in the recollection of some of the members here present, that, as the specimen in the Museum was labelled by myself, I felt called upon to give my reasons for thinking it part of the *Gaur*, and not of the *Gayal*; whilst that exhibited by Mr. Evans was perhaps the head of the latter animal, or a specimen of the other sex of the former. I have since been able to consult several authors on the same subject, and of collecting some information which I purpose to lay before you.

The first account of the *Gaur* I have met with is in the Memoirs of the Museum of Natural History by M. Geoffroy Saint Hilaire; being a translation of a notice by Major Roughsedge, sent by that gentle-

man to M. EUGE'NE DESBASSAYNS, son of the Governor of the French possessions in India, and by him to M. GEOFFROY SAINT HILAIRE. In this paper the only passage that bears upon the point in question, the form of the forehead, is the following, which I have retranslated, but which you will also shortly hear in the original:—"Its head has almost all the characters of that of our domestic bull, but the frontal bone appears more projecting and more elevated."

The next account is a more satisfactory one, contained in a paper by Dr. THOMAS STEWART TRAILL in the 11th volume of the *Edinburgh Philosophical Journal*; drawn up from a MS. journal of the same hunting-party mentioned in that furnished by Major ROUGHSEDGE to M. GEOFFROY SAINT HILAIRE, which took place at *Myn Pat* in *Sergújah*; and from the personal explanations of Captain ROGERS, who was of that party, and who is stated to have paid considerable attention to the quadrupeds of India. You recollect the remarkable *concavity* of the forehead of Mr. EVANS's specimen, and will be able to satisfy yourselves if that concavity accords with the projecting frontal bone spoken of above, and with the following description by Dr. TRAILL. He says—"The form of the *Gaur* is not so lengthened as that of the *Urna*. Its back is strongly arched, so as to form a pretty uniform curve, from the nose to the origin of the tail, when the animal stands still. This appearance is partly owing to the *curved* form of the nose and *forehead*, and still more to a remarkable ridge, of no great thickness, which rises six or seven inches above the general line of the back, from the last of the cervical, to beyond the middle of the dorsal vertebræ, from which it is gradually lost in the outline of the back." Now it is evident the above language could not be applied to an animal with a *concave* forehead, like that in Mr. EVANS's specimen; where the concavity instead of being but little below the rest of the bone, as it is in the domestic cow, made, as you saw, a deep fossa, forming a very remarkable feature; and which could not belong to an animal whose form exhibited along the back "a pretty uniform curve from the nose to the origin of the tail," and which "appearance is partly owing to the curved form of the nose and forehead:" for a concave forehead, like that in Mr. EVANS's specimen, would break the uniformity of the curve, instead of help to form it.

Again, Dr. TRAILL apparently in the very phrase, translated by M. GEOFFROY SAINT HILAIRE, says:—"The character of the head differs little from that of the domestic bull, excepting that the outline of the face is more curved, the os frontis more solid and projecting." This, no doubt, was also the case in the Society's specimen of the face,

as it is of the forehead. But in Mr. EVANS's specimen, so far from the face being more curved and the forehead more projecting, the face is quite straight and the forehead deeply concave. We may, therefore, safely conclude, that Dr. TRAILL's *Gaur* and Mr. EVANS's wore a very different appearance.

But the specimen in the Museum was marked as objected to by Mr. EVANS, on the authority of a paper, and figure of the horns and part of the skull, published by Major-General HARDWICKE, in the 3rd volume of the *Zoological Journal*. General HARDWICKE states, that, "as no drawing of the animal has yet been given to the public, to my knowledge, I am induced to offer to the *Zoological Journal*, for publication, a figure taken from a pair of horns of the *Gaur* killed, I believe, by the same hunting party described by Captain RODGERS, and presented to me by the principal member of the party, the late Major ROUGHSEDGE." This proves the source from whence General HARDWICKE obtained his specimen to be beyond dispute. And as he is a first authority upon Indian Zoology, and had Dr. TRAILL's paper before him, it is not likely he would have omitted any errors in the description of the forehead and horns, had there been such to notice. So far, therefore, the chain of evidence is complete. M. GEOFFROY SAINT HILAIRE described the *Gaur* from a MS. by Major ROUGHSEDGE; Dr. TRAILL did the same from a MS. supplied by an officer of the same party, (perhaps a copy of the same paper,) and from the remarks of Captain RODGERS who had paid much attention to Indian quadrupeds; and Major-General HARDWICKE publishes a drawing of the very head and horns, which were described in the above-mentioned manuscript, as those of the specimen killed in their party. This leaves no possibility of a doubt as to General HARDWICKE's specimen having been the *Gaur*; and his drawing in the *Zoological Journal* which I have the pleasure now of exhibiting, looks as if taken from this very identical specimen in your museum*. For both the specimen and the drawing shew the same rotundity of forehead, the same gentle convexity on the top of the head, between the horns, (and not a bold elevated crest or ridge, as in Mr. EVANS's specimen,) and the same proportionate size and curvature of horns. And I am sure on making the comparison you will think me fully borne out in concluding that the specimen I have marked, and General HARDWICKE has described, were both, or neither, belonging to the *Gaur*. But if you think we are mistaken, you must also hold the conjecture of Mr. EVANS, that this animal, which I have shewn to be identical with General HARD-

* See the copy of HARDWICKE's sketch in Pl. XVII.—ED.

WICKE's, is not the *Gaur*, be of more value than the positive assertion of Major ROUGHSEDGE who killed his specimen in its native woods, and sent its spoils to that eminent zoologist*.

It next remains to determine what species it is to which the skull exhibited by Mr. EVANS belongs;—a matter far more difficult than to prove the label correct upon the other. It is possible that it belonged to the *Gaur*, but to a specimen of a different sex from that in the museum, and that described in the Zoological Journal; that the differences, however strongly marked, may be merely sexual. But, as Mr. EVANS has stated, there is another animal of this country, called the *Gayal*, the *Bos frontalis* of naturalists, with some of whose characters it seems to agree.

The *Gayal* was mentioned so early as the year 1790 in an account of the mountaineers of *Tiprah*, published that year in the Researches of this Society, and there called the cattle of the mountains. There are two sorts, a tame and wild variety; the former of which was then an essential article among that people at their feasts, whether of a warlike, civil or religious nature. But Mr. COLEBROOKE, who published a description of it in the 8th volume of the Researches, appears to think it had been noticed by KNOX in his historical relation of *Ceylon*; and imperfectly described by Captain TURNER in his journey through *Bútán*. Mr. COLEBROOKE's paper is compiled from accounts of the *Gayal* drawn up by Drs. ROXBURGH and BUCHANAN, and Messrs. ELLIOTT, MACRAE, BIRD and DICK. The only mention made in this paper of the forehead of the *Gayal* is by Dr. BUCHANAN, as follows:—"The head at the upper part is very broad and flat, and is contracted suddenly towards the nose, which is naked like that of the common cow. From the upper angles of the forehead

* There is also another account of the *Gaur* by Major HAMILTON SMITH, but apparently that gentleman never saw the animal, and has compiled his remarks from the foregoing descriptions. He thinks it possible that "Pliny's Æthiopian bull with blue eyes might refer to this species;" (Plin. l. 8. c. 21;) whose description is thus given by Dr. PHILEMON HOLLAND, in his translation of the works of that author, a book almost as great a curiosity as the animals he describes:—"But the most fell and cruell of all others of that country be the wild buls of the forrest, greater than our common field buls, most swift, of colour breuded, their eyes grey or blewish" (colore fuluos oculis *ceruleis*); "their hair growing contrary; their mouth wide and reaching to the ears: their hornes likewise hardly moveable; their hide as hard as a flint, checking the dent of any weapon whatsoever, and cannot be pierced: all other wild beasts they chase and hunt, themselves cannot be taken but in pitfalls: in this their wildness and rage they dy and never become tame."

proceed two thick, short, horizontal processes of bone, which are covered with hair. On these are placed the horns, which are smooth, shorter than the head, and lie nearly in the plane of the forehead. They diverge outwardly, and turn up with a gentle curve. At the base they are very thick, and are slightly compressed, the flat sides being toward the front and the tail. The edge next the ear is rather the thinnest, so that a transverse section would be somewhat ovate. Toward their tips the horns are rounded, and end in a sharp point." Here the flatness and breadth of the forehead, and the sudden contraction towards the nose, correspond pretty exactly with those peculiarities in Mr. EVANS's specimen; but nothing can be made of the description of the horns, &c.; the whole having evidently been taken from the tame variety of this "cattle of the mountains." And there is no part of any animal which undergoes greater changes by domestication than the horns of the *Ruminantia*.

In the seventh volume of the Linnæan Transactions there is also a description of the *Gayal* by Mr. AYLMER BOURKE LAMBERT, accompanied by a plate, but which also was taken from the domestic variety.

The last account published of the *Gayal* is in the afore-mentioned paper in the *Zoological Journal* by General HARDWICKE. It is accompanied by a plate of the head and horns of the *Asseel Gayal*, or *True Gayal*. General HARDWICKE says—"Of the *Gayal (Bos Gayæus)* of COLEBROOKE, eighth volume of the Asiatic Researches, there appears to be more than one species. The provinces of *Chittagong* and *Sylhet* produce the wild, or as the natives term it, the *Asseel Gayal*, and the domesticated one. The former is considered an untameable animal, extremely fierce, and not to be taken alive. It rarely quits the mountainous tract of the S. E. frontier, and never mixes with the *Gobbah*, or village *Gayal* of the plains. I succeeded in obtaining the skin, with the head of the *Asseel Gayal*, which is deposited in the museum of the Honorable the East Indian Company, in Leadenhall Street, and from which the drawing was taken, which accompanies that of the horns of the *Gaur*."

On refering to the above-mentioned drawing you will perceive the same general appearance of face as the specimen of Mr. EVANS exhibited; the same flatness of forehead, which in the skull is probably a concave surface; the same marked ridge between the horns; and the same projection of the orbits, and sudden contraction of face towards the nose, to which he drew your attention in his paper.

Having thus laid before you all the authorities I have been able to collect, I think you will consider that I have proved my position,

that, the horns and frontal bone in your museum are those of the *Gaur*. I have also shewn that some of the characters of the *Asseel Gayal* are possessed by Mr. EVANS's specimen. But I feel that with the limited knowledge we still possess, it would be impossible in me to assert, or even to form a conjecture, that it really belonged to that animal.

In conclusion I must observe, that it but little redounds to the honor of Indian sportsmen, or I fear also of this Society, that we have not specimens both of the skins and skeletons mounted in our museum, to enable us to determine to which species a specimen belongs, of two of the largest ruminating animals known; natives of a country of which we have had interrupted possession for more than fifty years.

VI.— *On a new Genus of the Sylviadæ, with description of three new Species. By* B. H. HODGSON, *Esq., Resident in Nipal.*

SYLVIADÆ? Genus new. YUHINA, nobis. *Yuhin* of the Nipalese.

Bill equal to the head, slender, acute, depressed as far as nares; gradually compressed beyond: maxilla, cut out to centre by nasal fossæ, convex beyond, subarcuated, and gently inclined at tip, with two or three sharp teeth on either side: mandibula, straight, entire, equal to maxilla, pointed. Tomiæ of both, trenchant, scarpt and lockt throughout: nares large, the aperture lunated and lineated by a nude incumbent soft membrane. Tongue sub-equal to bill, cartilaginous, deeply-forked and the prongs filamentous and convolved. Wings medial, round-acuminate, firm, 1st quill small, 5th usually longest. Tail short, firm, square. Tarsi stout, finely scaled, longer than any toe. Toes short, exterior connected to the joint, interior basally; laterals and hind sub-equal; last very stout and depressed. Nails, falcate, strong, suddenly pointed; anteriors sub-equal; hind much the largest. Head crested. Rictus slightly bristled, not wide. Habitat central and northern regions: food, viscid strong berries, and small scaly insects, such as harbour among foliage. It is the opinion of Mr. VIGORS that these singular little birds serve to connect the *Sylviadæ* with the *Certhiadæ*. In the structure of the bill and tongue, and even of the feet and wings, they remind me of the genus *Sibia* (nobis), and of others of the *Philedonian* thrushes of CUVIER—a group, the contents of which have been referred at random to the *Tennirŏstral Meliphagidæ*, and (in part at least) to the long-legged division of the thrushes. These are high matters of classifi-

cation which may perchance be settled with an approach to accuracy some fifty years hence, provided our investigations meanwhile be carried into the general structure and prevalent habits of species—and be not confined, as now, to closet dissertations on dried skins.

The genus I now propose, as well as its location, are both provisional—my knowledge of the structure and habits of the species being confessedly incomplete; and the directions of the books within my reach being better calculated to misguide than to guide.

These little birds, so far as I have yet ascertained, adhere exclusively to the wild uplands; prefer the lower and more umbrageous to the higher and barer trees; and seem to procure no portion of their food from the ground. They are usually found in small flocks; and have a monotonous feeble monosyllabic note. They eat viscid strong berries and fruits, and many kinds of insects, chiefly of the scaled sort. Their intestines are about the length of their body (from the tip of the bill to the tip of the tail), furnished with grain-like cæca, near the lower end, and of nearly uniform diameter. Their stomach has the muscular coat of very moderate sub-equal thickness: and the lining neither very tough nor much grooved. Three species are known to me, in all of which the sexes resemble each other. I now proceed to a summary description of them, premising that the two first are typical, the last much less so.

Species 1st. *Yuhina gularis*; spotted-throated *Yuhin*, nobis.

Above, with the tertiaries and tail feathers, obscure olive brown: cap, darker and purer brown: ears, chin, throat and breast, obscure rufous wood brown; the chin and throat spotted with blackish, and bounded laterally by a longitudinal stripe of the same hue: rest of body below, bright orange rusty: primaries and secondaries black, the former with a narrow edging of hoary, and the latter with a broad one of orange: lining of the wings and inner margin of quills towards their bases, albescent: tail dusky internally: legs deep orange: bill fleshy brown with dusky culmen: iris brown: head with a full soft mobile and sub-recurved crest: size $6\frac{1}{2}$ by $8\frac{3}{4}$ inches, and $\frac{3}{4}$ oz., bill $\frac{8}{16}$ inch, tarsus $\frac{14}{16}$, central toe $\frac{9}{16}$, hind toe $\frac{8}{16}$.

Species 2nd. *Yuhina occipitalis*. Rusty-naped *Yuhin*, nobis.

Above, with the whole tertiaries and outer webs of the larger remiges and of all the rectrices, dull obscure olive brown: top of the head and back of neck dull slaty with hoary stripes: the nape, bright rusty: ears, chin, abdominal neck and the breast, vinous buff: a blackish stripe or moustache behind the gape: belly, rump and under-tail coverts, deep rusty: remiges and rectrices, internally dusky

inner basal margins of the quills pale buff: lining of the wings, white: legs, orange: bill fleshy red: iris brown: head with a full soft crest, as in the preceding: size $5\frac{1}{2}$ by $7\frac{1}{2}$ inches, and $\frac{1}{2}$ oz. in weight: bill $\frac{10}{16}$ of inch: tarsus $\frac{13}{16}$, central toe $\frac{7}{16}$, hind $\frac{5}{16}$.

Species 3rd. *Yuhina? flavicollis.* Yellow-necked *Yuhin*, nobis. Above, obscure brown, with a slaty tinge: cap pure rich brown: cheeks and nape paler: back of the neck, rusty yellow, continued in a collar round the sides and front of the neck and thence spread over the lower surface of the body and diluted often to white: chin and throat, white: moustache dark brown: remiges and rectrices, internally, dusky: the primaries edged externally with white on the outer webs; and all paled internally on the inner, as in both the preceding species: lining of wings, white: sides of body, shaded with brownish: legs yellowish fleshy grey: bill fleshy brown: iris brown: head crested as in both the preceding species: bill shorter, less acuminated, and furnished with only one salient process on each side the tip of the upper mandible of the bill. Size $5\frac{1}{4}$ by $7\frac{1}{4}$ inches, and less than $\frac{1}{2}$ an oz. in weight.

The following is a detail of the dimensions of a fine male specimen of the *Yuhina Gularis*; and which may serve to indicate the proportions of all the three species.

	Inches.
Tip bill to tip tail,	$6\frac{1}{2}$
Bill, length of,	$0\frac{11}{16}$
—— basal height of,	$0\frac{3}{16}$
—— ditto breadth of,	$0\frac{5}{16}$
Tail,	$2\frac{1}{2}$
Expanse of wings,	$8\frac{3}{4}$
Tarsus,	$0\frac{12}{16}$
Central toe,	$0\frac{8}{16}$
And nail,	$0\frac{7}{16}$
Hind toe,	$0\frac{6}{16}$
And nail,	$0\frac{5}{16}$

Weight, $\frac{1}{2}$oz.

Emendata in preceding ornithological papers.

Vol. V. page 777. Indication of a new genus of FALCONIDÆ; viz. *Bâza.*

Generic character. For "acropodia wholly *reticulate*," read "acropodia wholly scutellate."

On three new Genera of the Long-legged Thrushes.

Generic character of *Larvivora.* For "*nuchal* bristles," read "nareal bristles."

Vol. VI. p. 102, l. 26. Description of a new form of Meruline Birds; viz. *Sibia.*

Generic character. For "*nuchal* bristles," read "*nareal* bristles."

VII.—*Note on the occurrence of Fossil Bones in the Sewalik Range, eastward of Hardwar.* *By* H. FALCONER, *M. D., Superintendent Botanical Garden, Seharanpur.*

[See Proceedings As. Soc. 5th April.]

The *Sewalik* fossils have hitherto been found chiefly on the tract between the *Jumna* and *Sutlej*, and more sparingly in the clay marl between the *Jumna* and *Ganges*. There is no apparent reason why they should not be found in abundance in the protraction of the range which stretches eastward of the *Ganges* behind *Rohilkhand* and *Oude*. But it is of some interest to ascertain the fact in unexplored parts of the range, where they do exist, and where they do not. The fossils mentioned in the following list have been collected near *Hardwar* and in the low hills eastward of the *Ganges*, which skirt the province of *Kemaon*. The list contains nothing new: but it proves the occurrence of fossils where they had not been found before, and increases the probability of finding them still further to the eastward:

Mastodon Elephantoides—molars.

Rhinoceros—molars.

Hippopotamus Sivalensis—molars and tusks.

Hog—fragments of jaws with teeth.

Horse—molars.

Ox—teeth and other bones.

Deer of several sizes—jaws, teeth, astragali, horns, &c.

Crocodiles—*Garial*, *Magar*, } several fragments of jaws, teeth, and buckler plates.

Tortoises—*Emys*, *Trionyx*, *Testudo*, } numerous fragments.

Coprolites.

This list comprises a large part of the species found westward of the *Jumna*. The specimens are generally broken up into small pieces, greatly more so than in the *Nahan* tract. The largest fossil procured has been the plastron of a testudo 17 inches long. The bones are found in three states of fossilization, exactly resembling those from the westward of the *Jumna*; viz.

1st. The "soft" fossil; the animal matter removed, but the earthy constituents of the bones unaltered, and slowly soluble in diluted muriatic acid: occurring in beds of clay, and the cavities of the bones filled with the matrix. The specimens of this variety are very few.

2nd. The "hard" fossil, with a silicious or calcareous impregnation: the animal matter and earthy constituents entirely removed: occurring in sandstone matrix.

3rd. The "black" fossil, like the last, but impregnated with hydrate of iron: occurring in sandstone, or in a calcareo-argillaceous matrix.

No shells have yet been brought in.

VIII.—*Report Progress of the Boring Experiment in Fort William.* *By Major* T. M. TAYLOR, *5th Cav.*

[Read at the Meeting Asiatic Society, 5th April.]

The immediate superintendence of the boring experiment having, in consequence of my removal from Fort William, passed into other hands, I think it necessary to acquaint the Society with the progress that has been made since I had the honor to submit to them a note on the subject in June last. (See Proceedings As. Soc. vol. V. p. 374.)

At that time a depth of 175 feet had been attained by the borer, which then worked in a coarse sharp sand mixed with pieces of quartz and felspar, and from the little progress made, it was supposed a bed of gravel or shingle had been reached. This supposition, however, proved erroneous; for after some delay the work advanced, until, the borer having gained 178¼ feet, and the tubes being forced down to 180½ feet, they were observed soon after to have sunk by their own weight, and thenceforward up to the present time they have continued so to sink, maintaining a depth generally a few feet in advance of the auger.

It is remarkable that, although it was frequently tried, it was seldom found practicable to *force* the tubes down more than an inch or two at a time; yet, shortly after the removal of the pressure, amounting, possibly, to twenty tons, they would sometimes descend six inches or even a foot by their own gravity.

With a trifling variation in the color and fineness of the sand the stratum remained the same, until clay was found at 198¾ feet, but this stratum was not more than five feet in thickness; five feet of sand then occurred, and after it another layer of clay. At 212 feet a bed of sand was entered, which has been penetrated to a depth of 131 feet, without reaching its termination.

Long ere this the work would have been carried to the utmost depth for which tubing of the diameter in use has been provided, had it not been for two accidents, each of which was of so serious a

character as threatened to put a final stop to the work. The first was occasioned by the separation of a part of the borer containing a valve, when at the bottom of the well; and the second by the auger becoming jammed with a brazen plumb which had been lost in the bore sometime before, in such a way that the application of no force that the rods could sustain sufficed to move the implement in *any* direction. The force that was applied may be conceived when it is stated that it was sufficient to raise the whole line of tubing bodily in the bore.

Keeping the tubes in position, the rods, by the application of a screw, were at length forcibly torn from the auger a little below the screw which joined them; after which, as in the former case, the valve worm auger was broken off by the jumper, and the instrument brought up by the catching in the socket.

The success in overcoming these disasters must be mainly attributed to the zeal and perseverance of the sappers employed on the work: in the latter, however, they were guided by the able instructions of Captain J. THOMSON, who suggested the measures to be adopted, and supplied from his own stores some of the machinery to carry them into effect*.

When my superintendence ceased, (10th March,) the tubes had sunk to the depth of 343 feet, and the borer penetrated to 336 feet. The sand still continued to rise in the manner described in my former paper. It varies occasionally in color and substance, and latterly some pieces of felspar and lumps of indurated clay or sand have been picked out of the sand brought up. Specimens accompany this paper.

The supply of English tubing of the requisite character is very nearly exhausted, but an attempt will be made to cast some in Calcutta: if it fails, the experiment must necessarily be suspended until an indent that has been sent home be answered.

Note by the Secretary.

As a postscript to the above Report, I have now to announce a most curious and unexpected discovery, communicated to me this very morning by Colonel MACLEOD, the Engineer officer, who has succeeded to the charge of the experiment hitherto so successfully conducted by Major TAYLOR.

On a former occasion the Society was shewn metallic iron reduced from ore extracted from a depth of 150 feet, and sharp angular

* To guard as far as possible against breaking the rods by the force applied to extract them, Capt. T. connected his screw with the rod-head, through the intervention of a rod of somewhat smaller section which would consequently give way before any injury could happen to the borer.—ED.

quartz and felspar from 175 feet;—but here is something which will excite much more surprise—a FOSSIL BONE *brought up by the auger from a depth of* 350 *feet below the surface of Calcutta!*

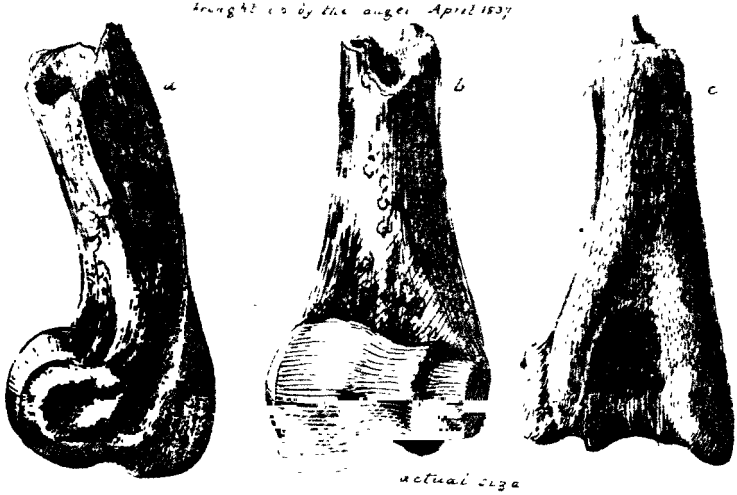
When it is considered how many million chances there were against an auger only a few inches in diameter, impinging upon the precise spot where a bone lay in the understratum,—the risk, too, of such a fragile object being ground to atoms by the tool, or pushed aside, and missed,—it may be regarded as the most extraordinary good fortune that the relic should not only have been met with but brought up entangled in the valve of the scoop without the slightest injury! The bone is the fractured lower half of a humerus of some small animal like a dog: it resembles the drawing of the corresponding bone of the hyena in CUVIER, but it is impossible precisely to identify it for want of skeletons for comparison.

The interior is filled with the micaceous sand in which it was imbedded, and scales of the same adhere to the exterior surface, as is shewn in the accompanying sketch, (see Plate XVIII.) The bone is not thoroughly fossilized, for when heated by the blow-pipe it becomes slightly charred and emits a perceptible odour:—but the animal matter left is exceedingly small, and the whole loss on heating a portion to a white heat was only 7 per cent., the greater part being moisture from the hydrate of iron with which it is impregnated. The greater part of the phosphate of lime remains with a proportion of carbonate: the specific gravity is 2.63, just the same as that of a fine specimen of polished ferruginous *odontolite* from the *Himalaya*: it requires the heat of an oxygen blow-pipe to fuse a fragment per se on platina foil.

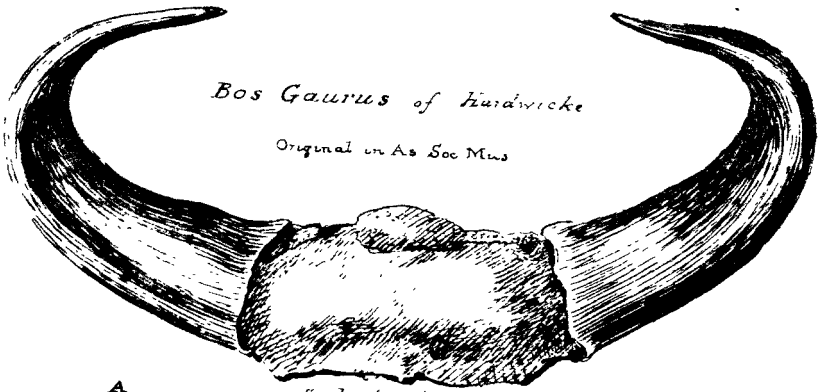
Of the relative age of this deposit, compared with that of the *Sewalik* and *Nerbudda* fossils, it is impossible to form any exact conclusions, but it is worth while to recapitulate briefly the conditions under which each are found.

The continuous stratum of lower sand in which our bone was buried at a depth of a hundred and fifty feet, may be regarded as the gradual deposit at the mouth of a primeval river: the excess of mica contained in it would seem to indicate its derivation from a gneiss or schistose source, such, indeed, as the present *Himalayan* or *Vindyan* range might still furnish. It was evidently anterior to the general and extensive alluvial deposits of the yellow *kankary* clay which entirely cover, or rather form, the Gangetic plain, and which the auger in Fort William had passed through before it attained the depth of 100 feet. Now the fossil bones of the *Jamna* were also found under the *kankar* clays of the *Doáb*, 150 feet below the surface, so that in this respect

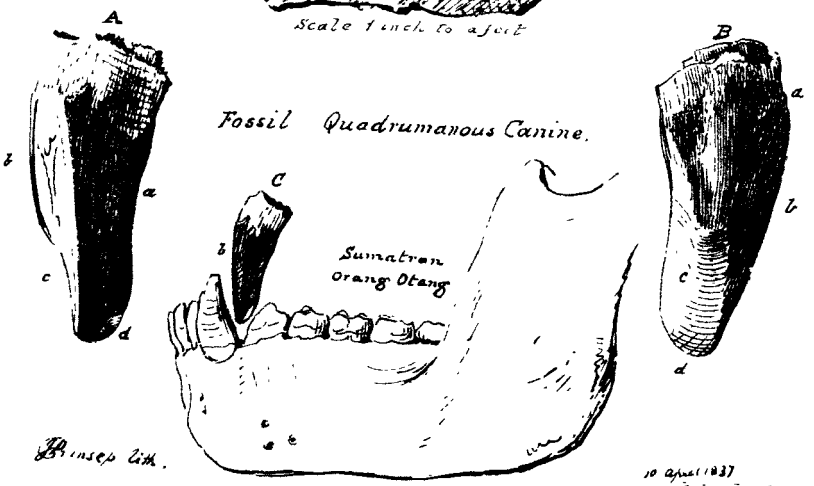
Fossil Bone from the Sand 350 feet below the surface Calcutta
brought to by the angel April 1837



actual size



Scale 1 inch to a foot



Rinsep Lith.

10 April 1837

the situation of the two is similar enough. The calcareous infiltration which has consolidated the sand and gravel of the *Sewalik* and *Nerbudda* matrix has been wanting here, and perhaps from its greater distance from the hills alone, the sand here is in a much more comminuted state :—geologically speaking, however, the whole of the fossils may belong to the same period of alluvial deposit—or, in other words, to an indefinitely distant epoch of the present system of quiescent operations in land and flood, whose gradual action has subsequently accumulated the superjacent beds of clay, abounding in minute fresh-water shells, extending for thousands of square miles —and again over them towards the delta of the *Ganges*, other more recent and extensive beds of blue clays, colored with vegetable debris and containing imbedded peat and wood, by which they are identified with the existing soil of the *Sunderban* forests. The mind is lost in contemplating the immense periods which such a deposit would demand at the hardly visible rate of present accumulation :—yet there are other causes of wonder in the several beds of coarse granitic angular gravel and nodular or pea iron ore which have been traversed by the auger before reaching the fluviatile sand beneath, These may indicate the volcanic upheavement and subsequently gradual decay of granitic and ferruginous hills, pending the progressive deposit of the alluvium, concerning which, however, we can know nothing certain, and need not therefore lose ourselves in conjectures. In like manner it might be advanced that the whole of the clayey strata were deposited in fresh water as the saliferous sand and sandstone of Upper India has been in salt water—and that the animals whose exuviæ are now brought to light at so many points, were the inhabitants of the borders of a prodigious bason. In the upper beds of blue clay penetrated in digging tanks and canals, bones have occasionally been met with (see the note on those found at *Dumdum* in Vol. II., page 649), but unfortunately none have been preserved. The occurrence of the remains of quadrupeds at one or two distant points of the series is sufficient to establish the conclusion that their existence has been coeval with the whole deposit; while the sharp unworn angles of the fort bone prove that the animal to which it belonged had lived and died in the immediate neighborhood.

In the accompanying sketch I have attempted to delineate of full size, Colonel MACLEOD's fossil bone, which may be designated without hesitation one of the most precious rarities ever deposited in the Museum of the Asiatic Society.

J. P.

IX.—*Proceedings of the Asiatic Society.*

Wednesday Evening, 5th April, 1837.

The Hon'ble Sir EDWARD RYAN, President, in the chair.

Mr. HENRY TORRENS, Colonel JOSEPH DE HEZETA, and Mr. STORM were unanimously elected Members.

The Right Reverend JEAN LOUIS, Bishop of *Isauropolis* and Vicar Apostolic of *Cochin-China*, was, on the favorable report of the Committee of Papers, unanimously elected an Honorary Member.

Colonel D. MACLEOD, Chief Engineer, and Captain S. F. HANNAY, were proposed by Captain PEMBERTON, seconded, the former by Major TAYLOR, the latter by the Secretary.

Mr. M. A. BIGNELL was proposed by the Rev. Dr. MILL, seconded by Mr. DOBBS.

Dr. W. GRIFFITH proposed by the Secretary, seconded by Mr. W. SPEIR.

An estimate for the repair of the Society's premises was submitted, but it was resolved to postpone such repairs as were not urgent until next year.

An estimate for the repair of Sir W. JONES's monument was submitted by Messrs. LLEWELYN and Co. amounting to Rs. 191: also deferred.

Library.

The Secretary reported that, in obedience to the instructions of Government, he had selected and packed, for transmission to the Honorable Court of Directors, the duplicates of the Sanskrit, Arabic, and Persian manuscripts, transferred from the College Library.

The following books were presented.

A grammar of the Sindhí language—*by the author, H. Wathen, Esq., Chief Secretary to the Bombay Government.*

Dispatches of the Marquis WELLESLEY, 2 vols.—*presented by Government through the Sec. General Department.*

A descriptive and illustrated catalogue of the Anatomical Museum of the Royal College of Surgeons in London—*by the College.*

President's address to the Geological Society, 1836, (copies for distribution)—*by C. Lyell, Esq.*

Scientific Memoirs selected from the Foreign Journals, a new periodical, Vol. I. Part I.—*by Richard Taylor, Esq. the Editor.*

The Madras As. Soc. Quarterly Journal. January. 1837—*by the Society.*

The Indian Medical Journal, and Scientific Review—*by Dr. Corbyn.*

Meteorological Registers to March—*by the Surveyor General.*

Museum of Antiquities.

The Honorable F. SHORE presented two pieces of sculpture brought from the *Gound* country on the *Nerbudda*. One, an erect image of *Buddha*, surmounted by an arch of celestial attendants; the other, an image of *Vishnu* in the form of a snake intertwined with *Lakshmí* as *Nága kunya*.

Major COVENTRY delivered, on the part of Colonel STACY, an accurate cast of a curious piece of ancient sculpture discovered by this indefatigable antiquarian in the neighborhood of Mainpúrí, and conjectured by him to be of a mixed Grecian and Buddhist style.

"I have the pleasure to submit a drawing on a scale of one-eighth, of a Sculpture on white marble, which I found at the village of *Prow* or *Pirow*, about 12 kos W. of *Mainpúrí*. It was lying on the ground, where I conclude from the mound, the original temple had stood. Finding so much of Grecian style in the ornamental parts, I resolved to purchase it, if possible; but after several months, having failed in my endeavours to induce the people to part with it, I sent a *kalassí* to take a cast. In his hurry to finish his work and return to his family, he took off the composition

before it was quite dry, and consequently bent the cast. Into this, on its arrival, I cast one with clay, prepared by a native potter; and the sketch is taken from that, by my native draftsman; with this difference—that the enclosed sketch shews the sculpture as on the marble, with the borders in a straight line. I shall have the pleasure of offering the clay cast to the acceptance of the Society. It is already packed, and shall be forwarded by the first opportunity. The drawing I beg may be returned. This Buddo-Grecian sculpture will, I think, be acknowledged as one more lent in support of the opinion urged in the concluding part of the sixth paper of your September number, 1836."

[We hope to present a drawing of the cast shortly.—ED.]

With reference to your hopes of finding other specimens of the "Silenus Sculpture" at *Muttra*, I fear they will end in disappointment, for I have most minutely examined every hole and corner. Indo-Scythic coins are found constantly and in great numbers. I propose sending you a statement of those most common in India to contrast with that of Mr. MASSON at *Cabul* in the 57th number, page 547, 1836.

A notice and drawings of a colossal alto-relievo, called *Mata kunr*, near *Kásia Thána*, in the eastern division of the *Gorakhpur* district, were forwarded by Mr. D. LISTON.

Received by the *Herefordshire* from Bombay, a series of facsimiles of the inscriptions at *Girnar, (Girinagar,)* very beautifully copied under Mr. WATHEN's superintendence from the original facsimiles lately taken by the Rev. Dr. WILSON, President Bombay As. Soc. for transmission to M. JACQUET of *Paris*.

These most valuable copies, occupying eight folios of 6 and 8 feet in length, comprise inscriptions in the three or four distinct characters now familiar to us. They are mostly in a good state of preservation, and one in the No. 2 14th character seems capable of being decyphered without much difficulty. The Rev. Dr. MILL was requested to undertake the examination of this important document.

Mr. WATHEN writes, that he has lately visited the caves of *Kanèri* in *Salsette*, and has had the inscriptions taken down by an experienced hand:—they seem to be in the character of the "Prescott" coins (of *Saurashtra* and *Cutch*). The caves are a collections of Buddhist temples, and there has been a large city on the mountain above. There are also the remains of a pillar similar to those of *Anuradhapura* in *Ceylon*, and a number of tanks cut in the solid rock, which are evidence of a large population besides the priests of the temple. "I explored the mountain until I came to one cave in which a *dehgopa* had been built of large blue stones, and the remains of the *chhatra* which touched the top of the cave are still visible. Some one, however, has been digging down into it, and I fear the relics have been carried off. I however intend to have it re-examined."

Literary Communications.

The Rev. Mr. YATES submitted a critical notice of the Sanskrit poem, entitled the *Naishadha* of SRI HARSHA, of which the first volume was lately published by the Society with the tika of PREM CHAND Pandit.

Captain OUSELEY, Sec. College Fort William, submitted, through the Secretary, a letter from Lieut.-Col. FRANCKLIN, M. R. A. S., regarding a proposal made by him to the Oriental Translation Committee of the Royal Asiatic Society, for the translation of some works from the ancient classics, and some of the best English authors into the languages of the East.

[Much of the Colonel's proposal has been already accomplished in this country:—we have even now before us a bold prospectus for a version of the Iliad in Bengálí by *Greececchunder*, with a sample of the first book rendered line for line from Pope. We have Gay's Fables—Rasselas—and the Percy Anecdotes. Maps, too, and works of Science, as Marcet's Natural Philosophy, Hutton, and Euclid,—not to omit the Persian edition of Marcus Antoninus by the Baron VON HAMMER. Any additions to this rising oriental library which England can furnish will of course be acceptable, and it is gratifying to see the influence of a contemporary of Sir WILLIAM JONES directed to so useful a project.—ED.]

Extract of a letter from Major DIXON, Political Agent in *Mhairwár*, was read, stating that in compliance with the Society's wish he had with

Col ALVES, made inquiries relative to the supposed existence of an extensive Buddhist library at *Jesalmèr*.

The only work of which they could learn was entitled "*Daudáh mat Jain marg grantha*," of which the Rája would willingly allow a copy to be made if desired. Although nothing either very ancient or of historical value could be expected under such a title, the Society deemed it on all accounts desirable to secure a copy of this manuscript, and accepted Major DIXON's and Col ALVES' obliging offer.

The Government, through Mr. W. H. MACNAGHTEN, Sec. Pol. Dept. presented a copy of a Journal of Captain C. M. WADE's expedition down the *Satlaj*, drawn up by Lieutenant F. MACKESON.

[This paper is printed in the present number.]

Also, the Journal of a visit to the *Mishmí* Hills in *Upper Assam*, by Dr. W. GRIFFITH.

Captain PEMBERTON presented his abstract of the journal of a route travelled by Captain S. F. HANNAY from *Ava* to the amber mines of the *Húkon* valley on the south frontier of *Assam*, with a protracted map of the route.

Mr. C. B. GREENLAW presented, on the part of the author, a memoir on the inhabitants of the *Maldive* islands, by Lieutenant YOUNG, I. N. of the ship *Benares*, lately employed on the survey of these islands.

Physical and Museum Natural History.

The collection of fossil shells from *Harper's Hill* and *Stony Creek* in *New South Wales*, forwarded by Lieutenant VICARY, had arrived.

[Lieutenant VICARY'S note shall be published when sketches of these shells, and the connected groupe from *Van Dieman's Land*, presented by Mr. W. CRACROFT, can be lithographed.]

A mounted specimen of the slow-paced Lemur, *(Loris Gracilis,)* presented by Mr. BELL.

A specimen of the large Paradise Bird, *(Paradisea Major,)* presented by Nawáb TUHAWUR JUNG.

A stuffed specimen of the common Pelican, *(Pelecanus Onocrotulus,)* presented by Dr. F. P. STRONG.

A specimen of the head, vertebræ and caudal fin of a large species of hammer-headed Shark, *(Zygœna —— ?)* presented by ROBERT ROSE, Esq.

This specimen is 9½ feet in length. It was found ashore in a bay at *Bírkúl* in the district of *Midnápur*, and the rest of its body eaten.

Two bottles of insects from *Assam*, presented by Captain JENKINS.

Two skins of the Yak, *(Bos Grunniens,)* presented by C. HARDING, Esq., who also sent for inspection a specimen of the skin of the Hill Fox, (*Vulpes Montana.*)

Mr. J. T. PEARSON exhibited two living specimens of the young of the *Felis Kutas.*

Extract of a letter from Lieut. COLIN MACKENZIE (*Malacca*) was read, apprizing the Secretary of his having at last succeeded in obtaining a tapir for the Society.

It was a fine young female, and had been taken with great difficulty alive: it would be sent up by the first opportunity with every precaution; the expence, including freight, would perhaps amount to 220 rupees.

Dr. H. FALCONER transmitted a memoir on some additional fossil species of the order *Quadrumana*, discovered in the *Sewalik* hills.

[We shall give insertion to this interesting paper in our next.]

Also a notice of the occurrence of fossil bones eastward of *Hardwár (Hari-dwára.)*

[Printed in the present number.]

Dr. H. FALCONER gives the following account of a very extraordinary elastic sandstone:—

"I have lately had sent to me to look at by Captain MCNAGHTEN, of *Karnál*, a specimen of rock which has surprised me beyond measure. It is a slab

of sandstone 14 inches long by 5¾ wide and 2 inches thick, and looks like a long brick. It exactly in appearance resembles the building sandstone used at *Agra. It is flexible and* ELASTIC *in every direction!!* If you place it flat on a table, and press the hand on one end and raise the other, you can bend it to a certain extent, and see the undulations moving along to the fixed end. If you seize it by both ends, one in each hand, and make an action as if you intended breaking it, you can see and feel it bend like a piece of whale-bone, but of course in an infinitely smaller degree, and the undulations are observed propagated from end to end. If you tap it on the side with the finger as you would a *massak* of water, it yields pretty much in the same fashion, propagates an undulation and instantly recovers its form. If you press it at the sides it gets narrower, and if you pull at the ends it elongates!! but always recovers its original form. Is there any account on record of so extraordinary a sandstone? Should there not, I may send you some notes about it. It is not known where the specimen came from." H. F.

The fossils dispatched by Dr. SPILSBURY had been brought down by the Honorable Mr. SHORE, but had been sent in the first instance to Dr. ROW at *Barrackpur.*

Dr. SPILSBURY notices that the beautiful meteor remarked at *Bersia,* (see Proc. February,) was also seen at *Baitul,* at *Hoshangabad* and *Jabalpur.*

A letter from Mr. W. DAWE announced the dispatch of a fresh selection of fossils (including a lower jaw of the *Sivatherium)* for the Society's Museum in three chests, which left *Karnál* 10th March.

Read a letter from Lieutenant T. HUTTON, proposing exchanges of fresh-water shells with the Society, for mutual benefit of cabinets.

The Curator explained that he had already effected the object desired.

A continuation of the Rev. R. EVEREST's notes on the Revolutions of the Seasons was received.

This part of the author's researches is accompanied by diagrams of the prices of grain in different years, whence an estimate is derived of the amount of rain.

A note on the genera *Oxygyrus* and *Bellerophon* was received from Mr. W. H. BENSON.

The following Meteorological notes were communicated by Major DAVIDSON, Engrs. from *Lacknau.* They seem to confirm the theory lately started of the prevalence of these asteroids in the opposite parts of the earth's orbit traversed in November and May.

1. On board the ship *Northumberland,* Captain POPE, proceeding from England to India in 1834, a pale star was visible for at least five days*, during sunshine. It was first discovered by Captain H. TIMMINGS, of the Bengal Horse Artillery, and was seen by all the crew and passengers of the ship. (Lat. long. unknown.)

2. At *Assirgarh* in April or May, 1823, I was lying awake on my bed at about 12 or 1 o'clock, when I was startled by a brilliant light advancing from the east end of a long narrow veranda. I waited a few seconds, expecting to see some of my family or servants bearing a candle, when (I presume as the meteor passed over my bungalow), I looked out in the compound, and observed the *individual shadows* of a *tall* Jámun tree, cast vertically on the ground—a circumstance I had never seen in the *brightest sunshine.* Not a breath of air, nor an audible sound. Conversing with Col. RICHARDS, commandant, I found that he had seen the *glare,* and that subsequently it had been reported to him that an immense number of stones had fallen from the sky, about twenty miles to the west of the fortress, in a forest, inhabited by *Bhils.* No inquiries were ever made.

3. While the Sappers and Miners were marching from *Cawnpur* on *Bhartpur,* (about November, 1824,) at 4 in the morning a meteor was seen by the officers of the Engineers *rising* in the North: it ascended from the horizon to an elevation of about 65°, and *remained* there in an obscure group of fixed stars for upwards of 25 minutes. On its first reaching the cluster, its light was *very distinct,* but it gradually melted away, until the eye could only detect its situation by the increased brightness of the spot, on making a sweep over that part of the heavens.

4. At *Assirgarh* fortress, during the rainy season, I often observed an insect formed like the common centipede, (Scolopendra electrica?) which at night used to leave a *glowing* fiery trace of its progress; and on one occasion, I had the curiosity to rub my fingers on the track, which was unctuous, and on smelling them found the strong and almost suffocating stench of burning phosphorus. C. J. C. D.

* This may have been the planet Venus?—ED.

Major TAYLOR submitted a Report (which was read) of the progress of the experimental Boring in Fort William up to the period of his resigning charge in consequence of his change of appointment.

[Printed in the present No. page 234.]

The Secretary stated that he had to bring to the notice of the Society a most unexpected sequel to Major TAYLOR's operations. Almost the first withdrawal of the auger by Colonel D. MACLEOD, Engrs., who succeeded in charge of the experiment, brought up a relic well calculated to reward the skill and labor of all his predecessors—a FOSSIL BONE *from a depth of* 350 *feet below the surface of Calcutta!* which Col. M. presented for deposit in the Society's Museum.

[See separate note appended to the report.]

Dr. B. BURT, 4th Regt. N. I., forwarded for the inspection of the Society, specimens of silk cloth dyed from the leaves of the teak tree, one yellow, the other olive. The following information on the subject of Dr. BURT's discovery of this cheap and durable dye is extracted from his letter to the Secretary, dated *Berhampur*, 4th March :—

"These properties of the leaves of the teak tree I accidentally discovered about five years ago, when I purchased the Honorable Company's teak plantation at *Bauleah*, since cut down ; but I had not an opportunity till lately of trying the effects of various mordants on it, when Mr. LAIDLAY, an expert practical chemist, was kind enough to assist me with his experience in the art of dyeing.

"The leaves at all seasons of the year contain the dye, but during the rains and cold weather, when their vegetation is most vigorous, they contain a greater quantity of it. They also retain it when dried for any length of time, so as to admit of its being exported to Europe, and I am sanguine enough in thinking it will become, when known there, a valuable article of trade with the mother-country.

"The experiments have as yet been tried with silk cloth alone, and with two mordants only, alum and acetate of iron, and the result is very satisfactory, the colors produced being permanent, and can be extracted from the leaf either by boiling or steeping in cold water. I have as yet unsuccessfully tried to obtain the dye in its pure state : its quantity, however, in the leaves and stalks of the leaves, as compared with other vegetable dyes, is very considerable.

"The piece of yellow silk sent was steeped in a saturated solution of alum for twelve hours, afterwards washed and dried, and then steeped in a cold decoction of the leaves for about three hours. The decoction was prepared from the green leaves and boiled for three hours, but the coloring matter may be extracted in much less time. The olive colors were obtained from the same piece of silk in its yellow state, steeped in acetate of iron for two or three hours. These colors may be varied, by more or less steeping in the dye liquor, from the most delicate straw color to the brightest yellow and olive green. Twelve of the leaves dried weighed three ounces and were boiled for an hour in two and a half quarts of water, one and a half quarts of liquor fit for dyeing was obtained on straining it, sufficient to dye several yards of cloth of the brightest yellow. From this some idea may be formed of the quantity of coloring matter in the leaf.

"Another property this dye contains superior to similar dyes used in this country, is that its color does not run or mix with other colors when printed on the same cloth.

"I intend making a few experiments with it on cotton, and may hereafter communicate the result."

A subsequent letter adds the following information :—

"Since forwarding the communication regarding the dye of the teak tree leaf, the following results of several experiments made with it deserve notice.

"The dye exists in the substance of the leaf, not in its stalks, as I at one time supposed. Alcohol extracts both the dye and the green coloring matter of the leaf. Water, hot or cold, extracts the dye alone. Soda, potash, the muriate of tin, and an astringent flower used by the natives in dying, called *dhyephúl*, decompose this dye. Liquor ammonia changes the yellow imparted to cloth to a snuff brown. Soap mixed with the decoction heightens the yellow color, but impairs the natural brilliancy of the silk. The acetate of iron produces from a dark slate color to every shade of green and olive, according to its strength and time of steeping. Boiling the leaves for an hour or two destroys the color ; this I am inclined to think arises from some of the leaves being carbonized by the heat of the vessel.—The most simple and easy way of extracting the dye is as follows. Take two gallons of water to one pound of the dry leaves ; bring it slowly to the boiling point in a copper or earthen vessel ; allow

it to cool, and then strain. About 1¼ gallons of liquor will be obtained, a sufficient quantity to dye a full piece of silk handkerchiefs 7 yards by 1 yard. The decoction thus prepared is of a dark brown color, has a peculiar smell not unlike that of senna leaves. If kept for six or eight hours it ferments, becomes lighter in color, but still retains the yellow dye which it imparts to silk after six or eight days, perhaps much longer, but the color is scarcely so brilliant as when the decoction is fresh.

"The acetate of alumina is a stronger mordant for this dye than the saturated solution of alum, and is therefore preferable in printing. When the cloth has been prepared with the mordants for dyeing and put into the decoction, the liquor ought to be heated to about 150°, as at this temperature the process goes on more rapidly than when cold. From 20 minutes to half an hour's steeping will be sufficient to impart to the cloth the brightest yellow. Boiling the cloth in the liquor injures the color."

It was resolved that the specimens should be submitted to those who are best acquainted with dyes in Calcutta, and eventually sent to the London Society of Arts.

The discovery of a new site of coal in *Upper Assam* was announced in a letter from Lieut. H. BIGGE, dated *Pachora* hills, 28th February.

"Knowing the interest you take in all matters connected with science, &c., I beg to acquaint you that Dr. GRIFFITH and myself, whilst exploring the banks of the *Namrúp* river, about nine miles E. S. E. from its junction with the *Bore Dihing*, in the *Singpho* country, have been fortunate enough to discover a most valuable seam of coal in the bank of the river; the upper seam was about 3 feet in depth, the centre one 9 feet, and a lower one of 3. We followed the seam up a small water-course to the south, which it crossed at an angle of 45°, and must have reached the surface a very short distance beyond, but we could not exactly determine this point. The general direction was from W. 5 N. to E. 5 S. the dip being towards the south.

"We loaded a small boat with this coal and sent it down to our camp for trial, when it was found to be an extremely good coal, burning with a strong flame and heat, and very lasting, but from the smell, containing a great quantity of sulphureous matter. It does not burn entirely away, but makes a large portion of cinder, and is, I should say, a very valuable description of coal.

"I have preserved some of the pieces which I dug out from the lower part of the centre seam, which I will take an early opportunity of forwarding to you on my return. Major WHITE also discovered several wells of Petroleum close to our camp on the *Namrúp* river, which emit considerable quantities of that oil, but which have hitherto been unknown to Europeans, and apparently almost unused by the neighboring Singphos. I have got several specimens of rocks and earth from these wells, which I shall also be happy to send you, should you require them.

"Iron would also have been found, but the weather during our stay was so bad as to prevent our making further or more distant research.

"This coal, though distant, might easily be made available for purposes of steaming on the *Burhamputra*, as small canoes carrying from 1 to 10 maunds, could take down the coal at all seasons to the *Bore Dihing*, where it could be reshipped, and sent down that river to *Jorhath*, or up *Kariam* and *Noa Dihing* to *Sadiya*. We are now at the foot of the pass to the Burman territories waiting for the mission, which *is said* to be coming to settle some boundary questions, but though we have been here since the 25th, no tidings have been received of them, and at this season; we shall, from the constant rain, be lucky to escape back to *Sadiya*, about 12 marches, without sickness."

The *Namrúp* coal is of various quality, from a genuine lignite of woody fibre passing into true coal as it descends. Two specimens gave the following composition.

	Fibrous Lignite.		Compact Coal.
Volatile matter, including water,	48.9		39.9
Carbon or coak,	47.7		58.1
Ash, red ochreous,	3.4	grey earthy	2.0
	100		100
Specific gravity,	1.312		1.244

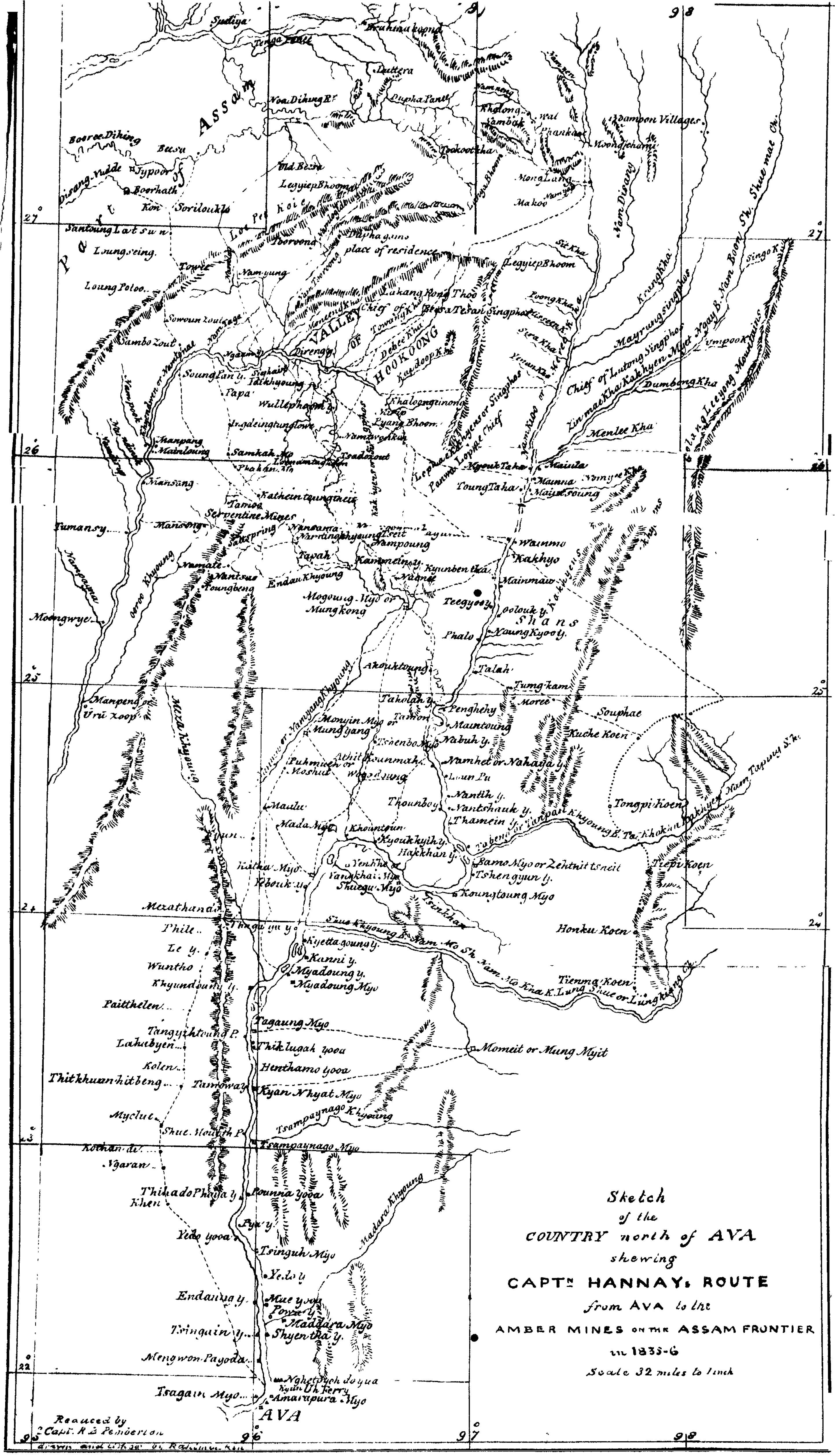
J. P.

In forwarding Lieut. BIGGE's specimens, Captain JENKINS notices the discovery of another site of coal in the *Dyung*, a naddi of Central *Kachar*, a new locality calculated to prove highly valuable from its accessibility. The specimen represents a jet coal of fine rich glossy texture, spec. grav. 1.220. With it are associated iron sand and pyrites.

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of March, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.				Observations at 4 P. M.							Calculated Humidity.			Register Thermometer extremes.		Rain.	Wind.		Weather.	
	Old Stand. Barometer at 32°.	New Stand. Batometer red.	Thermometer in air.	Depression of wet-bulb	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Do. by dew-point.		Old Stand. Barometer at 32°.	New Stand. Barometer.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do by hair Hygrom.	Do. by dew-point.	Cold on roof.	Heat in Sun's rays on roof.		10 A. M.	4 P. M.	Morning.	Evening.
1	30,026	30,016	79,3	8,8	10,7	54,8	77	59	54	46		29,940	29,906	84,9	14,3	14,3	54,3	71	43	45	38	60,0			N.	N.W.	cloudy.	cloudy.
2	29,994	,0 17	79,7	6,7	6,7	55,5	84	67	66	52		,850	,837	90,3	9,7	9,7	52,5	80	57	59	41	60,0	122,0		nw.	ne.	do	do
3	,943	29,932	77,9	5,5	12,4	52,5	79	66	57	44		,808	,790	88,7	13,4	10,7	57,4	69	33	42	37				sw.	sw.	fair.	fine.
4	30,070	29,983	74,9	7,6	8,3	52,8	84	64	74	49		,876	,852	87,1	16,6	17,6	50,8	71	37	45	31		106,6		sw.	sw.	thrtng.	clear.
5	,031	29,987	79,3	9,6	11,2		80	57	59			,920	,871	85,4	14,1	13,6	56,5	73	44	48	42	64,8	102,0		S.	ne.	clear.	do
6	,012	,96	79,5	7,7	9,5	63,5	80	65	59	60		,935	,883	86,3	15,1	15,8	57,8	67	41	40	41	65,6	117,8		w.	n.	do	cloudy.
7	,021	30,009	77,2	7,1	9,4	57,8	84	67	66	53		,896	,861	90,8	19,1	17,1	57,0	68	31	41	35	62,0	110,5		N.	nw.	do	clear.
8	,019	,003	81,2	10,6	13,2	55,3	74	54	49	44		,907	,868	90,5	19,2	19,0		65	31	37		65,0	109,0		o.	N.W.	do	do
9	,015	29,998	83,9	11,6	15,0		79	52	57			,887	,850	92,0	20,3	21,0	50,0	65	30	37	26	66,0	116,4		w.	W.	do	do
10	,006	,82	81,9	12,1	12,0		78	50	56			,864	,831	88,8	16,0			72	40	46		68,8	110,0		w.	w.	hazy.	do
11												,795	,765	84,1	16,1	15,6	54,0	70	40	44	34	62,2	113,0			sw.		cloudy.
12	,000	,976	80,7	15,2	16,4	52,0	64	37	36	39		,836	,805	84,2	17,7	16,4	56,0	63	35	36			113,3		nw.	o.	clear.	haze.
13	,028	,988	80,3	14,3	15,5	50,0	66	40	34	37		,869	,829	90,9	20,1	19,1	49,9	64	27	30	30	65,3	111,2		w.	o.	cir. c.	clear.
14	29,847	,862	77,9	8,6	10,0		86	61	70			,720	,667	89,6	17,3	18,7	50,0	70	37	44	29	64,5	113,5		sw.	sw.	cir. c.	cloudy.
15	,836	,821	80,3	11,5	14,3	51,0	71	51	45	30		,726	,671	90,9	21,5	24,0		56	27	27		57,8	118,3		w.	sw.	clear.	fine.
16	,866	,844	81,1	4,9	6,4	54,3	89	77	76	59		,771	,714	92,7	22,1	20,4		66	27	38		64,5			sw.	sw.	cumuli.	fine.
17	,904	,879	83,5	10,4	11,8	64,5	81	56	61	55		,762	,711	93,7	19,1	18,0	58,0	66	35	38	33		113,0		sw.	S.	circum.	do
18	,910	,891	84,6	5,4	7,7	72,5	86	77	70	68		,769	,702	95,2	23,2	24,0	59,6	59	26	30	34	62,5	126,8		s.	sw.	clear.	do
19	,875	,839	84,2	8,2	9,0	66,5	84	66	66	61		,729	,635	97,4	25,5	26,5	49,0	50	22	22		72,2	125,2		s.	W.	do	cum.
20	,846	,840	85,5	11,0	14,7	61,5	75	55	51	58		,722	,691	96,5	24,1	27,8	49,4	55	24	26	23	70,0	123,5		N W.	w.	do	fine.
21	,782	,780	84,9	7,4	8,6	67,2	84	69	66	57		,625	,595	94,1	20,9	23,6	55,6	59	30	30	30	72,0	108,8		sw.	ssw.	cum.	hail st.
22	,745	,714	84,1	5,8	6,4	73,5	90	78	78	72		,640	,592	90,5	11,1	11,5	63,6	74	50	49	51	75,2	122,6		w.	se.	clear.	clear.
23	,851	,810	84,6	4,9	4,9	73,5	90	79	78	71		,742	,701	91,6	9,6		72,0	80	55	59	55	66,1	116,2		S.	S.	do	do
24	,841	,702	85,0	5,8		72,7	84	75	76	68		,745	,696	90,9	6,9		72,3	84	63	61	56	72,5	102,5		S.	S.	do	do
25	,850	,911	84,6	6,8		68,8	86	71	70	60		,725	,669	90,6	10,3	9,1	72,4	87	61	72	57	67,5	103 5		S.	S.	cloudy.	do
26	,805	,794	84,4	7 1	6,0	71,5	89	70	76	67		,720	,674	88,4	8,0	8,2	74,5	85	67	64	65	75,4	102,2		S.	sw.	do	do
27	,855	,834	83,3	7,7	8,1	72,0	89	67	76	66		,719	,685	94,1	15,5	12,9	67,6	78	46	56	45	73,6	127,8		S.	sw.	do	do
28	,775	,743	86,1	12,9	13,1	63,7	79	50	57	49		,621	,572	96,5	22,8	21,5	59,7	64	27	36	32	72,5	117,3		sw.	se.	clear.	cloudy.
29	,737	,716	85,9	13,8	13,7	63,1	76	46	52	49		,590	,562	91,5	19,2	19,0	60,2	66	32	38	38	71,7	119,1		sw.	sw.	do	do
30	,748	,726	84,9	11,3	12,2	64,0	76	54	52	51		,645	,601	94,1	21,9	21,6	55,8	61	28	33	30	73,3	117,1		sw	o.	do	clear.
31	,804	,761	85,0	7,6	6,5	73,5	90	67	78	68		,670	,626	91,8	13,7	13,2	65,0	79	51	57	42	73,7	111,5		N.W.	nw.	do	do
Mean,	29,902	29,878	82,0	9,0	10,	62,6	81	61	62	55		29,775	,739	90,9	17,1	17,5	55,8	69	39	43	38	67,7	114,3			sw.	do	cum.

The barometrical differences at 10 and 4 are 022 and 046. In January they were 024 and 058. From the 20th the old hygrometer, supplied with new hair and properly verified in its scale, is registered. There are in fact three hair hygrometers of which the indications agree very closely together.


Sketch
of the
COUNTRY north of AVA
shewing
CAPTN HANNAY'S ROUTE
from AVA to the
AMBER MINES ON THE ASSAM FRONTIER
in 1835-6
Scale 32 miles to 1 inch
Reduced by
Capt. R. B. Pemberton
AVA
ASSAM
VALLEY OF HOOKOONG
Shans
Kakhyens

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I.—*Abstract of the Journal of a Route travelled by Capt.* S. F. HANNAY, *of the* 40*th Regiment Native Infantry, from the Capital of Ava to the Amber Mines of the Húkong valley on the South-east frontier of Assam. By Capt.* R. BOILEAU PEMBERTON, 44*th Regt. N. I.*

[With a Route Map of the country north of *Ava*.]

From the termination of the Burmese war to the present period the spirit of inquiry has never slept, and the most strenuous exertions have been made by the officers employed on the eastern frontier to extend our geographical knowledge to countries scarcely known but by name, and to acquire some accurate information regarding the manners, customs, and languages of the various races of men by whom they are inhabited.

The researches of Captains BEDFORD, WILCOX, and NEUFVILLE, and of Lieut. BURLTON in *Assam*, dispelled the mist which had previously rested on the whole of the eastern portion of that magnificent valley; and the general direction and aspect of its mountain barriers, the courses and relative size of its rivers, the habits of the innumerable tribes who dwell on the rugged summits of its mountains, or on the alluvial plains at their base, were then first made the subject of description, founded, not on the vague reports of half-civilized savages, but on the personal investigations of men, whose scientific attainments enabled them to fix with precision the geographical site of every locality they visited. The journey of WILCOX and BURLTON to the sources of the *Irawadí* river had proved the absence of communication between it and the great *Tsanpo* of *Thibet*, but they were unable to prosecute their examination further east; and though their researches had extended to a point not more than twenty miles dis-

tant from the meridian on which the labors of the Jesuit Missionaries in *Yunan* had been abruptly terminated, the intervening space, and great valley of the *Irawadí* still remained closed against them, and every attempt to enter either, from *Assam* or *Manipúr*, was defeated by the jealous vigilance of the Burmese authorities.

It is generally known that the course of the lower portion of the *Irawadí* river, or that part extending from *Rangún* to *Ava*, had been delineated by Lieut. WOOD of the Engineers, who accompanied Captain SYMES on his embassy to that Court; and that the features of the surrounding country, the size of the towns, its natural productions and population, had at the same time been investigated by the accurate BUCHANAN. Charts of this portion of the river, extending to *Monghabu*, the capital of the great ALOMPRA, had at a far earlier period been constructed, but the surveys were avowedly made in a manner not calculated to inspire much confidence in their accuracy; and the attention of Europe was first extensively drawn to this field of inquiry by the publication of SYMES, whose exaggerated views of the civilization, power and resources of the Burmese empire were generally adopted, while the more accurate estimates of his successor COXE were treated with comparative disregard.

In the very infancy of our intercourse with the Burman empire, and when the most persevering attempts were made to obtain settlements at various points of the coast, the more remote stations on the upper portion of the *Irawadí* river were not forgotten; and *Bamú* or *Bamo* was even then known as the emporium of a trade between the Burmese and Chinese, in which our aspiring merchants were most anxious to share. It is asserted that, at the commencement of the 17th century, factories were established in that neighborhood, but the permission to remain was shortly afterwards withdrawn, and the information which it is supposed was then obtained of the surrounding country has never been rescued from oblivion:—this is the less to be regretted as the loss has been fully compensated by the results of recent research; and the journey of Captain HANNAY, of the 40th Regiment Native Infantry, from *Ava* up the *Irawadí* river, to the frontier towns of *Bamo* and *Mogaung*, has at length rendered this hitherto inaccessible region almost as well known to us as the more southern districts, through which this noble river directs its course. Many geographical points of extreme interest have been determined by the personal observation and inquiries of this meritorious officer. *Bamo* has for the first time become accurately known from the same source—much valuable information has been gained

respecting the trade carried on between *Ava* and *China* in this remote corner of the *Burman* empire—the habits and localities of some of the principal tribes occupying the mountainous tracts bordering on western *Yunan* have been successfully investigated—the position of the very remarkable valley of *Húkong* has been determined—the *Pyendwen* or amber mines have for the first time been examined by the eye of European intelligence—the latitudes of the principal towns between *Ava* and *Múngkhong* have been ascertained by astronomical observation with a degree of accuracy sufficient for every purpose of practical utility, and they may now be regarded as established points, from whence inquiry can radiate in every direction with a confidence which the most zealous and enlightened investigators have been hitherto unable to feel in prosecuting their researches, from the want of a few previously well-determined positions at which to commence or terminate their inquiries.

To an act of aggression on the part of a *Singpho* tributary of *Ava* against a chieftain of the same clan residing under our protection, are we indebted for the opportunity of acquiring the information now gained, and the feud of two insignificant borderers may prove the immediate cause of a more intimate communication than had ever previously existed between our recently acquired possessions in *Assam* and the northern provinces of the *Burman* empire.

The Bísa and Dupha Gaums are the heads of two clans of Singphos, occupying the northern and southern faces of the chain of mountains, which forms a lofty barrier between *Ava* and *Assam*. The former chieftain, on our conquest of the latter country, tendered his submission and was admitted within the pale of that feudatory dependence which many other tribes of the same clan had been equally anxious to enter;—he was uniformly treated by the local authorities with great consideration, and was located at the northern foot of the *Patkoí* pass leading from *Assam* to the *Húkong* valley. Between this chieftain and the Dupha Gaum a feud had existed long previous to our assumption of the sovereignty of the country; and the latter, at the close of the year 1835, headed a party, which crossing the mountains from the Burmese province of *Húkong*, entered *Bísa*, the residence of the chief of that clan, and after ravaging and plundering the village, sealed their atrocity with the indiscriminate murder of all the inhabitants that fell into their hands. The circumstances were made known to the British Resident at the Court of *Ava*; inquiry was demanded, and security required against the recurrence of similar acts of aggression. A deputation from the capital was ordered

to the Burmese frontier for the purpose of instituting the necessary investigation, and Colonel BURNEY, the enlightened representative of British interests at that court, failed not to avail himself of the opportunity thus unexpectedly afforded, of attaching an officer to the mission; and Captain HANNAY, who then commanded his escort, was selected for the duty.

The party, consisting of the newly appointed Burmah governor of *Mogaung*, of Captain HANNAY and several Burmese officers of inferior rank, with a military escort, left *Ava* on the 22nd of November, 1835, in a fleet of 34 boats of various sizes, for a part of the country which had been uniformly closed against strangers with the most jealous vigilance. "No foreigners," says Captain HANNAY, "except the Chinese, are allowed to navigate the *Irawadi* above the choki of *Tsampaynago*, situated about seventy miles above *Ava*; and no native of the country even is permitted to proceed above that post, excepting under a special license from the Government. The trade to the north of *Ava* is entirely in the hands of the Chinese, and the individuals of that nation residing at *Ava* have always been vigilant in trying to prevent any interference with their monopoly."

The mission was detained the two following days near the former capital of *Amarapura*, to complete the quota of troops by which it was to be accompanied, and whose discipline, when they did join, was very soon found to be on a par with their honesty.

"They work their own boats," says Captain HANNAY, "some of which are covered in, and others are quite open. Their musquets (if they deserve the name) are ranged here and there throughout the boat, and are never cleared either from rust or dust, and wet or dry they are left without any covering. Each man carries a canvass bag, which is a receptacle for all sorts of things, including a few bambú cartridges. He wears a black Shán jacket and a head dress or *goung-boung* of red cotton handkerchief, and thus equipped he is a complete Burmah militia man. They appear on further acquaintance to be better humoured than I at first thought them, but they are sad plunderers, and I pity the owners of the fields of pumkins or beans they come across. I have remarked that whatever a Burman boatman eats in addition to his rice, is generally stolen."

Except at *Kugyih*, where there are said to be several Christian villages, of which, however, no satisfactory information could be obtained, the progress of the mission was unmarked by any circumstance of interest, until its arrival at *Yedan*, where they entered the

first *kyouk-dwen*, or rocky defile, through which the river directs its course. Lower down, the extreme breadth of the stream had varied from one to two and a half miles, but here its width was contracted to less than a quarter of a mile, with a porportionate increase in the depth and velocity of the current. During the rainy season of the year, boats shoot through these narrow passes with terrific velocity, and the numerous eddies caused by the projecting rocks, add greatly to the danger of the passage. In this part of their course, the mission frequently met large rafts of bambús descending from the *Shúeli* river, and upon them, small baskets of pickled tea, brought from the hills to the south-east of that river. This tea was said to be manufactured by a race called *Palong Puon*, who are under *Momeit*. At *Tsingú*, Captain HANNAY saw three native Chinese from *Thengyíchú* or *Mounyen*, and several others in the service of the noblemen of the court, had accompanied the expedition from *Ava* with the view of proceeding to the *Kyouk Tsein*, or Serpentine mines near the sources of the *U'rú* river, west of the *Irawadi*. On the 30th of November the party left the village of *Yedan Yua*, where a perceptible change takes place in the character of the country and river. "The latter," says Captain HANNAY, "from covering an extent of miles is sometimes confined within a limit of 150 yards, without rapids or torrents, as I had expected, but almost as still as a lake. In some places its depth is very great being upwards of 10 fathoms. It winds through beautiful jungle, in which the *pípal*, *símal* trees, and bambús, are conspicuous, and it has, generally speaking, a rocky bed and banks, which last rise to a considerable height, and composed of sandstone, which varies from dark to a white and yellow color." At the next stage, or *Thihadophya*, Captain HANNAY mentions a very remarkable instance of the tameness of the fish, which are not allowed to be killed, and are found from about a mile below the village to an equal distance above.

"If rice is thrown into the water from the boat, a dozen fish, some of them as much as three and four feet long, come to the surface, and not only eat the rice, but open their mouths for you to put it in, and they will allow you to pat them on the head, which I and some of my followers actually did. Some of these fish are apparently of the same species as those called in India *gúrú* and *rúta:* indeed the Hindus who are with me called them by these names. The breadth of head is remarkable, and the mouth very large; they have no teeth,—at least so the people told me, whom I saw feeling their mouths." This spectacle, strange as it must have appeared, was hardly more so

than the adventure of the following morning, when Captain HANNAY "was awoke by the boatmen calling to the fish to participate in their meal."

On the 1st of December the expedition arrived at *Tsampaynago*, which has been before mentioned as the limit, beyond which, even natives of the country are not permitted to proceed without an express order from the Government. The custom-house or thana is on the right bank of the river, and *Malé myú* which is close to it, contains about 800 houses with many very handsome gilded temples.

The Myothagyí or deputy governor of the town, is also the custom officer, and a tax of 15 ticals per boat is levied on the Chinese coming from *Bamo*. Old *Tsampaynago myo* is situated at the mouth of a small river which flows from *Mogout* and *Kyatpen*, and falls into the *Irawadí* immediately opposite the modern chokí of that name. The sites of *Mogout* and *Kyatpen*, where some of the finest rubies of the kingdom are obtained, were pointed out to Captain HANNAY as lying in a direction N. 80° E. of *Tsampaynago*, and about 30 or 40 miles distant, immediately behind a very conspicuous peak called Shueú Toung, which he estimated at 3,000 feet high. The *Madara* river, as well as that of *Tsampaynago*, flows from the same mineral district which must greatly facilitate communication with it. The inhabitants of the country were unwilling or afraid to communicate any information regarding these secluded spots, and their exact locality is still a subject of conjecture. The mines are described as in a very swampy situation, and surrounded at a trifling distance by lofty hills. The three places at which the gems are principally sought, are *Mogout*, *Kyatpen* and *Loungthé*, and the principal miners are Kathays or Manipúrís, with a few Chinese and Shans. The other most celebrated spot is *Momeit*, the site of which BUCHANAN found some difficulty in determining, but which Captain HANNAY learnt was not more than two or three days' journey, or between 20 or 30 miles north of *Mogout* and *Kyatpen*. While at this place Captain HANNAY says, "they heard the people who were cutting bambús in the hills, rolling bundles of them down the face of the steep. Having made a road by felling the trees, the woodmen allow bundles of 150 and 200 bambús to find their way to the bottom, which they do with a noise that is heard at the distance of eight miles. They are then floated down the small river into the *Irawadí*, but this operation can only be effected during the rains." The party now began to feel the cold excessively, and its severity was greatly heightened by a strong northerly wind, which seldom subsided until the afternoon, and was particularly keen in the narrow passes or *kyouk-dwens*.

Tagoung Myú, which was reached on the 5th of December, is an object of peculiar interest, as it is said to have been built by a king from Western India, whose descendants afterwards founded the kingdoms of *Prome*, *Pagan* and *Ava*. Captain HANNAY found the walls of the old fort dwindled away to a mere mound, and hardly discernible from the jungle with which they were covered; but adds, "that enough is still seen to convince one that such a place did formerly exist. The fort has evidently been parallel with the river, and is on the left bank which is high and composed of sandstone. About half a mile inland, the remains of the inner walls run north and south, with an opening or gap to the east, in which there is an appearance of a considerable ditch, which I was told is filled with water in the height of the rains. The whole has more the appearance of an old brick fort, than any thing I have seen in *Burmah*, and I should say it had been built by a people different from the present race of Burmans."

About a mile to the south of *Tagoung* are the extensive ruins of *Pagan*, which stretch as far as the eye can reach, and here Captain HANNAY discovered impressions of Hindu Buddhist images, stamped upon a peculiar kind of brick composition (terra cotta), and with inscriptions which he imagined to be written in some variety of the Deva-nágrí character. The Burmese on the spot were unable to explain their nature or origin, and the learning of an aged priest proved equally incompetent to the task of deciphering them:—they were subsequently, however, submitted to some Burman antiquarians at the capital, by the Resident, whose paper on the subject and a drawing of the images appeared in the 51st No. of the Journal of the Asiatic Society.

At *Shwezí-goung*, a large pagoda among the ruins of *Tagoung*, Captain HANNAY obtained an extensive view of the subjacent country, and more accurate information of the site of the celebrated mines of *Momeit* than had been practicable at an earlier period of his voyage. From these accounts it appears that the locality which is said to produce the finest rubies in the kingdom, is about forty-five or fifty miles east of *Tagoung Myú*, from whence it can be reached by a foot traveller in three or four days, and by a laden bullock in ten. A drove of these animals was just about to leave *Tagoung* for *Momeit* on Captain HANNAY's arrival, and from the owners he learnt "that after selling their *ngapee* (potted fish) at *Momeit*, *Mogout* and *Kyatpen*, they proceeded to the country of the Palongs, which bounds the district of *Momeit* on the east, and purchase tea, both pickled and formed into balls, a part of which is brought to *Ava*." The fish,

which apparently forms the staple of the trade, is said to be of a remarkably fine description, and is dried in a manner peculiar to *Tagoung*.

On the left bank of the river, between *Henga-myo* and *Tagoung*, the teak tree first begins to appear, and at *Kyundoung* on the opposite side, it is said, that timber is found sufficiently large to form a boat from a single tree; it grows principally on the western face of the hills, at whose eastern base *Kyundoung* stands. A delay of two days at this village enabled Captain HANNAY to ascend to the summit of the first range of hills, by the road which leads across them to the valley of the *Mú* river: he found it a well-beaten track and great thoroughfare, by which the inhabitants of the country as far west as *Wantha Myú*, are accustomed to convey their supplies of fish, salt and oil from *Kyundoung*, a place apparently of some trade: the bazar contained 50 shops which were large and supplied with British piece goods, uncleaned cotton, silk, and cotton Burman dresses, coarse white cloth and other articles of country manufacture. "Besides these," adds Captain HANNAY, "I saw three Chinese shops, where spirits and pork were sold. The streets were crowded with people from the interior, who had come to make purchases, and amongst them were several Kadús, a race of people of a different origin from the Burmahs, and scattered over the tract of country between this and *Mogaung*. They are most numerous in the districts of *Manli* and *Mankat* situated on the *Meza* river* which comes from the north and west, and runs between the *Kyundoung* range and that called the *Thegyain* range, still seven or eight miles north of our present position. Rice, being the staple of the country, is an article of barter, and is sent in considerable quantities to *Ava*. Cotton, brought from the interior, is also an article of barter, and a good deal of it is sent to *Bamo*, but a part of it is made into cloth on the spot, as I saw several looms at work. Yellow and red cotton handkerchiefs of British manufacture sell here for two ticals a piece, which is about 100 per cent. beyond the price at *Ava*."

To this point of their progress, no diminution in the volume of the *Irawadí* was perceptible, and the channels proved sufficiently deep for the passage of large boats, from which we may infer that all the principal feeders or affluents, which pour their tributary streams into the *Irawadí* were still further north, and had not yet been reached. The first of any importance noticed is, the *Shue li khyoung* on the left bank, the northern branch of which flows from the Chinese fron-

* A small stream not more than fifty yards broad, with but little water.

tier town of *Santa-fá*, called by the Burmahs *Mola Santa*, and a southern branch from *Momeit*, the site of the celebrated ruby mines already noticed: the confluence of these streams is represented as occurring at the village of *Laha* about 40 miles from the *Irawadí*. Neither branch can be of any magnitude, for Captain HANNAY remarks that at the point of junction with the *Irawadi*, the breadth of the *Shuélí* is not more than 300 yards, and that it contained but little water,—a satisfactory proof that, this stream can have no connexion with the *Tsanpo* of *Thibet*.

At *Yebouk yúa*, a day's journey above the *Shué khyoung*, two boats passed the party with Chinese in them from *Bamo*. "They work their boats which are of the Burman round-shaped flat-bottomed description, and seem to be of a tolerable size, as there must have been at least twenty men in each. These boats are particularly well adapted for the navigation of the *Irawadí*, as they do not draw more than 18 inches of water."

On the 13th of December the party reached *Katha*, a town of some extent on the right bank of the river, containing about 400 houses, and a population whose numbers appear to be annually increased by large parties who come from the interior, and take up a temporary abode on the right bank of the river, and on the numerous islands and shoals in its bed, for the purpose of fishing and traffic: at the close of the season they return to their respective homes in time for the resumption of agricultural labour, and a traveller ignorant of this nomade custom, which appears to be very general in the upper part of the *Irawadí*, would form an exaggerated estimate of the population of the towns and villages in which they are thus temporarily congregated. "The bazar of *Katha* was well supplied with good native vegetables of various sorts, fresh and salt fish, pork sold by Chinamen, dried cocoanuts, sugar-cane, and rice from the coarsest to the best quality, the latter selling at 15 ticals a hundred baskets." Captain HANNAY also saw a small quantity of stick lac in the bazar, but it was dear, and of a description very inferior, to that which is procurable at *Rangún*, and is brought from the Shán territory east of *Ava*. Even at this remote spot there was a 'tolerable display' of British piece goods, but not nearly to the extent noticed at *Kyundoung*. Captain HANNAY mentions a *Kyoung* or monastery recently erected by the Myothagí of *Katha*, as one of the most remarkable objects of the place. "It is a large wooden building covered with beautiful carved work, and situated near the river. The grounds surrounding it are extensive, and very tastefully laid out with fruit trees and flowery shrubs,

amongst which I saw the Chinese rose in great plenty." The river is here confined by lofty banks not more than two furlongs apart, but the stream is very deep, and the spot appears to be a particularly favorable one for obtaining a good section of the river, the velocity of which at *Wegyih*, a village above *Katha*, Captain HANNAY estimated at one mile and a half an hour, with an average depth of 18 feet. This would give a discharge of about 52,272 cubic feet per second, while that of the *Ganges* at the same season may be assumed on RENNELL's authority at 80,000 feet per second, giving for both a proportion of 1 to 1.53. No satisfactory comparison can, however, be yet instituted between these magnificent rivers, for up to the present moment we are without a single section of the *Irawadí*, which could be safely assumed as the basis of a calculation sufficiently accurate for such a purpose.

At *Kyouk-gyih*, which the party reached on the 17th, they had fairly entered the remarkable curve in the *Irawadí* which had been previously represented in all our sketches of the river, and served, in the absence of more accurate information, as a point of reference generally well known to the Burmahs and Sháns. Here there is a ledge of rocks, over which the stream passes with so great a degree of rapidity, as to render it very difficult of navigation during the rains. The rocks are serpentine and the sand collected amongst them appeared to be a mixture of small garnets and iron sand. The right bank of the river, for two miles below *Kyouk-gyih*, is composed of small round stones and sand, and Captain HANNAY was told that the natives wash the soil for gold.

No circumstance throughout this voyage afforded a more gratifying proof of the friendly feeling generally of the Burmese authorities, than the attentions which Captain HANNAY received at every place at which they halted. Houses were erected for his accommodation at the various stages of the route, differing in no respect from those intended for the Myúwún of *Mogoung*; presents of fruit, rice, and vegetables were daily made to himself and followers, and the supposed tedium of his evenings was relieved by a band of singers and dancers, who are found at almost every town and village in the Burman empire. At *Kyouk-gyih*, these attentions were shewn to a very remarkable degree by the Woon of *Munyen*, "whose civility," says Captain HANNAY, "was the subject of conversation with every one in the fleet.

"Every individual has received sufficient rice and fish for two days' supply, and my boat was filled by him with all sorts of provisions, enough certainly to last myself and my followers for a week." The

house of this liberal Woon, Captain HANNAY describes "as a very neat and comfortable dwelling, with a remarkably clean compound, in which there is a garden laid out with a great deal of taste, and, besides many articles of costly Burman household furniture, he has a number of very fine muskets and other arms." The party had now approached within a comparatively short distance of *Bumo*, and the vicinity of this celebrated mart was shewn, in more numerous villages than had been seen for several preceding days. From *Shuegú Myú* to *Balet*, a distance of three miles, the houses appeared to extend in an uninterrupted line, and *Kywún do*, the name of a celebrated island in the river, covered with 100 pagodas, is most conveniently situated between these towns, the inhabitants of which hold their principal festivals upon it, at particular seasons of the year.

Near this spot, is the entrance to the second *kyouk-dwen*, the scenery of which appears to be very magnificent, and is thus described by Captain HANNAY. "The river passes directly through the hills, which rise perpendicularly on both sides to the height of 400 feet; they are rocky, and of irregular and singular forms, having at the same time a sufficient number of trees on them to render the scenery very striking. One part of the range, on the right bank, rises as perpendicularly as a wall to the height of 500 feet, forming a grand and terrific precipice. This *kyouk-dwen* extends for four miles, and the hills which form it, are throughout of a rocky nature. The upper part of them appeared to be sandstone, resting on a base of blue-colored limestone, mixed with veins of beautiful white marble; and at one spot I saw large masses of compact and foliated primitive limestone, along with calcareous spar in large pieces."

Koung-toun, which the mission reached on the 20th, is said to contain about 200 houses, and is noted for the defence made by its Burmese garrison, against a large invading force of Chinese during the last war between these two nations. A ditch surrounds the town, and the remains of a brick redoubt, loop-holed for arrows or musquetry are still perceptible encircling a pagoda. "This is now all that is to be seen," adds Captain HANNAY, "of the old fortification, but the town is still surrounded by a double palisade of bambús with sharp stakes placed between them." These defences are intended for the protection of the inhabitants against the Kakhyens, a tribe occupying the hills to the east, who frequently come down in small bodies for the purpose of carrying off cattle. Captain HANNAY saw a great number of this tribe at *Koungtoun*, where they barter their rice and cotton for salt and *gnapee*, (potted fish) and describes them, with few

exceptions, as perfect savages in their appearance ; their cast of countenance forms a singular exception to the general rule, for it is not at all Tartar in its shape, but they have, on the contrary, " long faces and straight noses, with a very disagreeable expression about the eyes, which was rendered still more so by their lanky black hair being brought over the forehead so as entirely to cover it, and then cut straight across on a line with the eyebrows. These people, though surrounded by Sháns, Burmese and Chinese, are so totally different from either, that it is difficult to imagine from whence they have had their origin."

On the 20th of December the fleet moored at a village about five miles below *Bamo*, which being a town of great importance, and the residence of an officer inferior in rank to the *Mogoung* Woon, some previous arrangements were necessary to enable the latter to land with the eclât due to his rank. On reaching the town late on the following day, they found the left bank on which it stands so precipitous, that they were compelled to cross to the opposite side of the river, and a feeling of jealousy having arisen between the two Woons of *Mogoung* and *Bamo*, the former resumed his journey on the 22nd, which compelled Captain HANNAY to defer the inquiries he was so anxious to make until his return in April, when he found the people far more communicative than they had ventured to be in the presence of the *Mogoung* Woon. The information obtained on both occasions will be more advantageously shewn in a connected form than in the detached portions in which it necessarily appears in his journal, and Captain HANNAY's first remark solves a difficulty, which, like the Adria of ancient history, has proved a stumbling block to modern investigation. In the course of inquiry into the sites of the principal towns on the *Irawadí* river, that of *Bamo* naturally held a very prominent place, and some of the native Sháns, who were questioned on the subject affirmed that it was on the bank of the *Irawadí* river, while others, whose opportunities of acquiring information had been equally good, positively denied this statement, and fixed its position on the left bank of a small stream which flows into the *Irawadí*, about a mile above the present town. Captain HANNAY reconciles the conflicting statements, briefly but satisfactorily, in the following remark :—

" I find that this is a *modern* town erected on the banks of the *Irawadi*, for the convenience of water carriage between it and *Ava*. The *old* Shán town of *Manmo*, or *Bamo*, is situated two days journey up the *Tapan* river, which falls into the *Irawadí* about a mile above

the new town of *Bamo* or *Zee-theet-zeit*, or new mart landing-place."

"This modern town," says Captain HANNAY, "is situated on high unequal ground, and the bank towards the river is from 40 to 50 feet in height, and composed of clay. With the exception of *Ava* and *Rangún* it is the largest place I have seen in Burmah, and, not excepting these places, I certainly think it the most interesting. The novelty of so large a fleet as ours passing up (and no doubt, having heard that a European officer was of the party) had attracted a great crowd of people to the river side, and on landing, I felt as if I were almost in a civilized land again, when I found myself amongst fair complexioned people, wearing jackets and trowsers, after being accustomed to the harsh features and party-colored dress of the Burmans. The people I saw were Chinese from the province of *Yunan*, and Sháns from the Shán provinces subject to *China*. *Bamo* is said to contain 1500 houses, but including several villages which join it, I should say it contained 2000 at least, 200 of which are inhabited by Chinese. Besides the permanent population of *Bamo*, there are always a great number of strangers there, Chinese, Sháns, and Kakhyens, who either come to make purchases or to be hired as workmen. There are also a great number of Assamese both in the town and in the villages immediately connected with it, amongst whom are several members of the *Tapan* or *Assam* Rája's family. *Bamo* is the jaghire of the *Tapan* Rája's sister, who is one of the ladies of the king of *Ava*.

"The inhabitants of this district live in large comfortable houses, which are thatched with grass, and walls made of reeds. They are generally railed in, and all the villages have bambú palisades surrounding them. The Palongs of the Chinese frontier are, I am told, remarkably industrious. They are good dyers, carpenters and blacksmiths, and all the *dhas* or swords used in this part of the country are made by them." "I received," adds Captain HANNAY, "great attention from the Myúwún of *Bamo*, and also from the head Chinese there; they sent me tea, sugar, dried fruits, and vegetables, for which I, of course, made a suitable return. The annual caravan from *China* had not arrived, and the supply of Chinese articles in the shops was very small."

The people of *Bamo* were so strongly impressed with the idea that Captain HANNAY's only object was to find a road by which British troops might penetrate to *China*, that he found it extremely difficult to obtain any information from them regarding the routes into that country. The Chinese themselves, however, proved more com-

municative, and from them he learnt the existence of several passes from *Bamo* into *Yunan;* but as one of these presents far greater facilities of transit than the others, it is generally adopted for commercial intercourse, and the mode of carrying it on is thus described. "At the distance of two miles* above *Bamo* the mouth of the *Taping* or *Tapan* river is situated. This river has a direction N. 70 E. for about two days' journey, when it cuts through the Kakhyen range, and under these hills, old *Bamo*, or *Manmo*, is situated. To the latter place the Chinese take their merchandise from modern *Bamo* by water, and then proceed overland to the chokí or *ken* of *Loailong* near *Mowan*, which they reach in three days, and from thence to *Mounyen* or *Tengyechew* in the province of *Yunan*, at which place they arrive in eight or nine days. The road from *Bamo* to *Loailong* is through the hills, which are inhabited by Kakhyens and Palongs, after which it passes through the country of the Sháns, called by the Burmans, *Kopyi-doung*. The road is described as being very good, and quite a thoroughfare. The *Tapan Khyoung* is not navigable for large boats, in consequence of which the Chinese use two canoes tied together, with a platform over them, for the transport of their merchandise to *Manmo* or old *Bamo*, and for the remainder of the journey it is carried on ponies or mules."

This description of the size of the *Tapan Khyoung*, which is also called by the Sháns *Numtaping*, completely sets at rest the keenly agitated question of its identity with the *Tsanpo* of *Thibet*, and the theory of KLAPROTH, (who, on the authority of Chinese writers, calls it the *Pinglankhyoung*, and maintains it to be the prolongation of the *Tsanpo*) is shewn to have no better foundation than his unauthorized change in the position assigned to the latter river, in that part of its course which passes through *Thibet*. Captain HANNAY describes the *Taping* as not more than 150 yards broad, and with only sufficient water to float a small boat. The Singphos affirm that it is a branch of the *Shuelí Khyoung* (the *Lungshué kiang* of the Chinese) from which it separates above *Momein*, but the accuracy of this report appears highly questionable.

The principal article of trade, which is cotton, is entirely in the hands of the Chinese, who arrive at *Bamo* in the months of December and January. The greater part of their imports is taken to *Ava*, as neither the natives of *Mogaung* nor *Bamo* could afford to purchase them. "What they dispose of here," says Captain HANNAY, "are copper pots, carpets and warm jackets." These articles are also

* In another place it is mentioned as only one mile above *Bamo*.

taken all over the Burman territories, as far west as the *Khyendwen*. There are several cotton godowns here, belonging to the Chinese, and there are constantly residing in the town 500 of these people, which, with the numerous arrivals from different parts of the country, gives the place a very business-like appearance, and there is of course a good bazar." There is a very neat temple built by the Chinese of *Bamo*, which Captain HANNAY visited, and was most politely received by the officiating priest. "On entering his house," says Captain HANNAY, "he rose to meet me, saluted me in the English fashion, asked me to sit down, and ordered his people to bring me tea; after which he sent a person with me to shew me the curiosities of the temple. Most of the figures were carved on wood, and different from what I have generally seen in Chinese temples; one of them represented the *Nursinga* of the Hindus. The Chinese of *Bamo*, although different from the maritime Chinese, in language and features, have still the same idea of neatness and comfort, and their manners and mode of living appear to be much the same."

"Their temple and all the houses, which are not temporary, are substantially built of bricks stained blue; the streets are paved with the same material, and the grounds of the temple are surrounded by a neat brick wall covered with tiles." "Besides the trade carried on at *Bamo* by the Chinese, the Shâns, Palongs, and Singphos under *China*, are great purchasers of salt, *gnapee*, dried fish, and rice, but particularly salt, which is in constant demand; and to procure it, numbers of the above named people come to *Bamo*, *Sambaungya* and *Kountoung*. The salt which sells here for twenty ticals of silver for 100 vis, or 28 rupees for 150 seers, is brought principally from *Sheinmaga* above *Ava*, and from *Manbú*, which is situated two marches west of *Katha*. The Shâns here are distinguished by their fair complexions and broad good-tempered faces. They wear turbans and trowsers of light blue cotton cloth; they greatly resemble the Chinese, and from living so near that nation, many of them speak the *Yunan*-Chinese language. They inhabit the country to the east of *Bamo*, and their principal towns are *Hotha*, *Latha*, *Santa*, *Sanla*, *Moongsye*, *Moong-woon*, *Moong-man*, *Moong-la*, and *Moong-tye*. The people are generally designated Shân Taroup or Chinese Shâns."

"Although the Palongs speak the Shân, their own native language is a distinct one. The men, though small in stature, are athletic and remarkably well made. Flat noses and grey eyes are very common amongst them. They wear their hair tied in a knot on the right side of the head, and dress in a turban, jacket, and trowsers, of

dark blue cloth. They are a hill people, and live in the tract of country situated between *Burmah* and *China*, but those to the east of *Bamo* pay no revenue to either country, and are governed by their own Tsobuas. The Singpho traders I saw at *Bamo* were very different from those under *Burmah*, and according to their proximity to either Shâns or Chinese, they assimilate to one or other in dress and language."

"The whole of these people," says Captain HANNAY, "pay for every thing they require in silver; and were it not for the restrictions in *Burmah* on the exportation of silver, I think an intelligent British merchant would find it very profitable to settle at *Bamo*; as, besides the easy intercourse with *China*, it is surrounded by numerous and industrious tribes, who would, no doubt, soon acquire a taste for British manufactures, which are at present quite unknown to them." The revenue of the district is estimated by Captain HANNAY at three lakhs of rupees per annum; and he adds, "If appearance of comfort may be taken as a proof of its prosperity, the inhabitants of *Bamo* shew it in their dress and houses. I have seen more gold and silver ornaments worn here than in any town in *Burmah*."

On leaving *Bamo*, the appearance of the country became much more hilly, and great precautions were taken to guard against surprise by the Kakhyens, who inhabited the different ranges in the vicinity of the river.

At *Hakan* the escort was reinforced by 150 soldiers from *Bamo*, and a number of families who were proceeding up the river, joined the fleet to enjoy the protection afforded by so large a convoy. The Shâns who composed the quota from *Bamo* were a remarkably fine set of men from the banks of the *Tapan Khyoung*, and formed a striking contrast, in dress and appearance, to the miserable escort which had accompanied the party from *Ava*.

At the village of *Thaphan-beng* they entered the third *Kyouk-dwen* from which a very beautiful view is obtained of the fertile valley of *Bamo*, bounded on the east by the Kakhyen hills, which are cultivated to their summits. Serpentine and limestone were the principal rocks found in this defile, as well as the preceding one; and as the river was here in some places not more than 80 yards broad, with a depth of 30 feet, and its rise is in the rains 50 feet above the present level, the rush of waters must at that season be terrific. The natives, indeed, declared, that the roar at that time was so great, as to prevent them from hearing each other speak, and that the defile could only then be traversed on rafts: now, however, it coursed gently along with an almost imperceptible motion.

At *Thabyebeng-yúa* they found a new race of people called Phwons, who described themselves as having originally come from a country to the north-east, called *Motoung Maolong*, the precise situation of which could not be ascertained. Their native language, which they speak only in intercourse with each other, differs altogether from the Shán and Burmese, but they have no written character. There appear to be two tribes of this race, distinguished by the Burmahs as the great and small:—the former are found only at *Tshenbo* and in the vicinity of the third *Kyouk-dwen*, while the inferior tribe is scattered all over the country: the only difference apparently between them consists in some trifling varieties in the dialects they speak. Their extensive cultivation proved their agricultural industry, and four Chinese Sháns were constantly employed in manufacturing their implements of husbandry. Their houses were of a construction totally different from any that had been previously seen, and consisted of a long thatched roof rounded at the ends and reaching almost to the ground. Inside of this and at the height of eight or ten feet from the ground, the different apartments are formed, the walls of which are made of mat.

"From the outward appearance of these houses," says Captain HANNAY, "it would be difficult to imagine that they were habitations, but inside they are very comfortable, and from the great thickness and peculiar form of the roof, the inmates cannot be much affected either by heat or cold." The same description of house is built by the Sháns occupying the valley of *Kubo*, and it is probable that the Phwons have adopted this style of building from some tribe of that widely scattered nation.

On the 26th the fleet reached a part of the *Irawadí*, which is considered the most dangerous point in its navigation. It is called *Puskú*, and the stream is there confined to a breadth of 30 yards, but with no less than nine fathoms of depth in the centre. The rocks bore every appearance of fierce and irregular volcanic action, varying in color "from brown, yellow, red and green, to a jet black which shone like a looking glass." The strata also presented a scene of great confusion, some being vertical, some horizontal, and others twisted; "the whole having exactly the appearance of having been poured out from a furnace."

The navigation of the *Irawadí* river up to this point had been unmarked by difficulties of any magnitude, and, with the exception of the passes through the *Kyouk-dwens*, the channel appears to have afforded, even at that season of the year, an abundant supply of water for the

largest class of boats, which ply between *Ava* and *Bamo:* above the village of *Namhet*, however, they first met a succession of rapids extending for a mile and a half, which were even then considered dangerous; and Captain HANNAY remarks, that he had seldom seen in the worst season, and worst part of the *Ganges*, a stronger current, or more turbulent water than at the rapids of *Shuégyain-man*, a short distance above the village of *Namhet*.

On the arrival of the fleet at *Tshenbo*, which is about 10 miles below the mouth of the *Mogaung* river, the boats by which the party had been conveyed from *Ava* were exchanged for others of a smaller description, better adapted for the navigation of so small and tortuous a river as that of *Mogaung*. The one prepared for Captain HANNAY's accommodation was of the kind called by the Burmese "*loung:*" it was paddled by 25 men, and formed of a single tree, with the addition of a plank 10 inches broad, all round the upper part of it.

Before quitting *Tshenbo*, Captain HANNAY had a visit from the head priest, whose curiosity to obtain some knowledge of European customs and habits could only be satisfied by the display of the contents of his trunks, and the sight of his watch, sextant, and thermometer; all of which he was permitted to examine by Captain HANNAY, who regrets that he had not brought some missionary tracts with him from *Ava* "to give this inquisitive priest some idea of the Christian religion." *Tshenbo*, on the authority of this priest, is said to have been formerly a principal city of the Phwon tribe, who were dispossessed of it, about sixty years ago, by the Burmahs.

On the last day of December the mission reached the mouth of the *Mogaung* river, which Captain HANNAY ascertained by observation to be in latitude 24° 56″ 53″. Here they were to quit the *Irawadi*, which, says Captain HANNAY "is still a fine river flowing in a reach from the eastward half a mile broad, at the rate of two miles an hour, and with a depth varying from three fathoms in the centre to two at the edge."

The *Mogaung* river on which the town of the same name is situated, is not more than 100 yards wide, and the navigation is impeded by a succession of rapids over which the stream rushes with considerable velocity. The smallest boat in the fleet was an hour and a half getting over the first of these obstacles, and the Shán boatmen, who are thoroughly acquainted with the character of the river, "pull their boats close to the rocky points, and then, using all their strength, shoot across to the opposite side before the force of the stream had time to throw them on the rocks." The Burmah boatmen adopted the apparently easier method of pulling their boats up along the edge of the stream, but this proved

both difficult and dangerous, one boat being upset and a man drowned. The banks of the river were covered with a dense and impervious jungle, which extended nearly the whole way to *Mogaung*, and no village served to beguile the wearisome monotony of this portion of the journey, until they reached *Akouktoung*, a small hamlet on the right bank inhabited by Phwons and Sháns. Here they met a chief of the *Laphae* Singphos, who had taken up his residence in this village with a few followers, in consequence of a feud with some neighbouring tribes in his own country to the north. Between *Akouk-yúa* and *Tapoh* (the next village seen) the bed of the river is filled with rocks and rapids, which render the navigation exceedingly dangerous, the stream shooting over them with such velocity as frequently to rise above the bow of the boat, which, in case of unskilful management, would be instantly upset. The way in which the Phwons and Sháns overcome these difficulties, formed a striking contrast to the conduct of the Burmah and Kathay boatmen. The former working together with life and spirit, still paid the strictest attention to the orders given by the head boatman; while the latter "who think," says Captain HANNAY, "that nothing can be done without noise, obey no one, as they all talk at once, and use the most abusive language to each other." He thinks the Phwons and Sháns greatly superior to the Burmahs or Kathays,—meaning by the latter those Manipuris resident in *Ava*, who are Burmans in every thing but origin.

After passing the last rapids at *Tapoh* the river expands in breadth to 200 yards; the stream flows with a gentle current, and "the bed is composed of round stones which are mostly quartz. Amongst them, however there are found massive pieces of pure crystal stone, partaking of the nature of talc, and also pieces of indurated clay of different colors. The banks are alluvial on the surface, but towards the base and near the edge of the river the soil becomes gravelly, and in some places has a stratum of beautiful bright yellow-colored clay intersecting it."

On the 5th of January the party disembarked from their boats, and as the Myo-wún was to be installed in his new government, the landing was effected with considerable state. "Arrangements," says Captain HANNAY, "had been made for our reception, and on first landing we entered a temporary house where some religious ceremony was performed, part of which was the Myo-wún supplicating the spirits of three brothers who are buried here, and who founded the Shán provinces of *Khanti*, *Assam*, and *Mogaung*, to preserve him from all evil. After which ceremony he dressed himself in his robe of state,

and he and I proceeded hand in hand through a street of Burman soldiers, who were posted from the landing place to the Myo-wún's house, a distance of nearly a mile: we were preceded by the Myo-wún's people carrying spears, gilt chattas, &c. and at intervals during our walk, a man in a very tolerable voice, chaunted our praises, and the cause of our coming to *Mogaung*. Several women also joined the procession, carrying offerings of flowers and giving us their good wishes."

The Myo-wún appears to have lost no time in availing himself of the advantages of his situation, for on the very day after landing, he commenced a system of unsparing taxation, to enable him to pay for his appointment. A rapid succession of governors within a very few years, all influenced by the same principle, had already reduced the inhabitants of *Mogaung* to a state closely bordering on extreme poverty, and the distress occasioned by the exactions now practised was bitterly complained of by the wretched victims of such heartless extortion. The Shán inhabitants of the town were employed by the Burmese officers to enforce this excessive payment of tribute from the Singphos and Kakhyens of the surrounding hills, which had led to much ill-will on the part of the latter, by whom they are stigmatised "as the dogs of the Burmans."

"The town of *Mogaung*," says Captain HANNAY, "is situated at the junction of the *Namyeen* or *Namyang*, and the *Mogaung* or *Numkong* rivers, and extends about a mile from east to west along the bank of the last named river, the west end of the town being bounded by the *Namyeen khyoung*, which comes from the district of *Monyeen* in a direction S. 43 W. The town of *Mogaung*, strictly speaking, is confined within what is now only the remains of a timber stockade. Outside of this, however, there are several houses, and within a short distance a few small villages are scattered about, but even including all these, there are not more than 300 houses. Those within the stockade are inhabited by Sháns, and those outside by Burmans, Phwons, Assamese and a few Chinese. The latter to the number of 50 reside here, and are under the authority of a Thoogyee of their own nation;—they derive a profit from their countrymen who come annually in considerable numbers to purchase serpentine. Amongst them I saw both blacksmiths and carpenters, and, for the first time since leaving Gangetic India, I saw the operation performed of shoeing horses. The Sháns, inside the stockade, reside in large houses, such as I formerly described having seen amongst the Phwons;—the Burmans and others live in the same description of

houses as are to be seen in every part of *Burmah proper*, but all bear signs of great poverty; and if it were not for the Chinese, whose quarter of the town looks business-like and comfortable, I should say that *Mogaung* is decidedly the poorest-looking town I have seen since leaving *Ava*. There is no regular bazar, all supplies being brought from a distance, and the market people are, with few exceptions, Kakhyens and Assamese from the neighbouring villages."

The arrival at so remote a spot of a European officer was soon bruited abroad, and Captain HANNAY's time was fully occupied in answering innumerable questions put to him by a crowd of visitors, who examined his sextant with great care, under the firm conviction that, by looking through it, he was enabled to perceive what was going on in distant countries;—nor would they believe that the card of his compass was not floating on water, until, to satisfy them, he had taken it to pieces. The paucity of inhabitants and poverty of the town plainly indicated the absence of extensive trade, and Captain HANNAY learnt, that, including the profits derived from the sale of serpentine, the revenues of the town and neighbouring villages did not amount to more than 30,000 rupees per annum, and the Burmah authorities can only enforce the payment of tribute from the Shâns of *Khanti*, and the Singphos of *Payendwen*, by the presence of an armed force. In their last attempt on the latter, a Burmah force of 1000 men was detached from *Mogaung*, of whom 900 were destroyed; and for ten years they had been held in salutary dread by the Burmah governors of the frontier. During his stay at *Mogaung*, Captain HANNAY obtained specimens of the green stone, called by the Burmah's *kyouk-tsein*, and by the Chinese *yueesh**, and which he supposes to be nephrite. "The Chinese," he says, "choose pieces which, although shewing a rough and dingy-colored exterior, have a considerable interior lustre, and very often contain spots and veins of a beautiful bright apple-green. These are carefully cut out, and made into ring stones, and other ornaments, which are worn as charms. The large masses are manufactured by them into bracelets, rings, and drinking cups, the latter being much in use amongst them, from the idea that the stone possesses medicinal virtues. All the

* Monsieur ABEL RE MUSAT, in the second part of his history of *Khotan*, is said by KLAPROTH (Mem. Rel. à l' Asié, tome 2, p. 299) to have entered into a very learned disquisition proving the identity of the *yu* or *yueesh* of the Chinese with the *jasper* of the ancients.—R. B. P.

The *yu* is a silicious mineral, colored with less intensity but passing into heliotrope. It is therefore *prase* rather than *jade* or nephrite.—ED.

yueesh taken away by the Chinese is brought from a spot five marches to the north-west of *Mogaung*, but it is found in several other parts of the country, although of an inferior quality. Serpentine and limestone are the prevailing formations of the base of the highest ranges of hills throughout this part of the country. Steatite is also abundant in the bed of the *Irawadi* below the valley of *Khanti*."

One very important object of Captain HANNAY's mission was to cross the *Patkoi* mountains into *Assam*, and on his arrival at *Mogaung* he waited some days in considerable anxiety for the *Kakhyen* porters, who were to convey his baggage and supplies during the remaining portion of the journey:—he soon found, however, that the authority of the Burmans when unenforced by the presence of a large military detachment, was held in the most sovereign contempt by these hardy mountaineers, and after many fruitless attempts to induce the *Mogaung* woun to allow him to proceed with even a small party, he was constrained to limit his further researches to the *Húkong* valley and amber mines. Repeated remonstrances were necessary to induce the governor to proceed even so far, and it was not until the 19th of the month that an advanced guard crossed the river, and fired a feu de joie, after performing the ceremony of sacrificing a baffaloe to the Nhatgyee (or spirits of the three brother Tsaubuas of *Mogaung*), without which no expedition ever marches from the town. Even then, the dogged obstinacy of the governor induced him to delay his departure, and it was not until Captain HANNAY threatened that he would instantly return to *Ava* if there were any longer delay, that the wily diplomatist could be induced to move.

On the 22nd they crossed the river, and the camp was formed on the northern bank, in strict accordance with Burmese custom. Captain HANNAY's tent (a common sepoy's pál) was the admiration of every one but its owner, who now for the first time marched with an undisciplined rabble. "The soldiers' huts," says Capt. HANNAY, "are composed of branches of trees and grass, and if they wish to be particular, they cover them with a piece of cloth, which is generally some old article of dress. The Myo-wún's station is in the centre of the camp, and in front of him are his own immediate followers, whose huts are formed into a street marked by a double line of spears. At the head of this street the flags are placed, and also the two small cannons (one-pounders), which are sent with the force, I believe, for the purpose of firing three rounds morning and evening, to frighten the neighbouring Kakhyens, and which ceremony, I suspect, will be gone through with as much gravity, as if it would have the desired

effect. My position is in front and a little to the left of the Myowún, and we are completely surrounded by the soldiers, whose huts are in distinct lines, the men of each district keeping together."

On the 22nd they at length set out, and the style of march was as little in accordance with the military experience of our traveller, as the previous encampment. "The men, to the number of 800, march in single file, and each man occupies a space of six feet, being obliged to carry a bangy containing his provisions, cooking pots, &c. besides his musket, which is tied to the bangy stick. This is the most common mode of marching, but some of them carry their provisions in baskets, which they strap across their forehead and shoulders, leaving their hands free to *carry* their muskets; but as to *using* them it is out of the question, and I should say the whole party are quite at the mercy of any tribe who choose to make a sudden attack upon them." On reaching the encamping ground, however, these men gave proof how well they were adapted to this mode of travelling, for in an hour after their arrival, every individual had constructed a comfortable hut for himself, and was busily engaged cooking the rice, which, with the addition of a few leaves plucked from certain shrubs in the jungle, forms the diet of the Burman soldier on the line of march.

The tract of country through which the party passed on the first two days was hilly, and abounded in a variety of fine forest trees; but on approaching *Numpoung*, the second encampment, the country became more open, and the pathway led through a forest of very fine teak trees. The principal rivers all flowed from the *Shuédoung-gyi* range of hills on the east of their route, and are at this season of the year mere mountain torrents, with so little water in them, that the path frequently passes over their rocky beds. The whole route from *Mogaung* to the *Húkong* valley, may be described generally as passing between defiles, bounded by the inferior spurs of the *Shuédoung-gyi* range on the east, and numerous irregular hills on the west; these defiles form the natural channels of numerous streams, which, flowing from the heights above, and struggling amidst masses and boulders of detached rock, make their way eventually to the larger stream of the *Numkong*, which unites with the *Namyen* at *Mogaung*. The only traces of inhabitants perceptible in the greater part of this route were a few cleared spots on the hills in the vicinity of some scattered Kakhyen villages, and a few fishing stakes in the mountain streams. Near the mouth of the *Nam-say-Khyoung* the party met with a few Kakhyen huts, which appear to

have been constructed by that tribe, during their fishing excursions; and at *Tsadozout*, an island in the bed of the *Mogaung* river, on which the force encamped on the 28th of January, they passed the sites of two Kakhyen villages, and found the ground completely strewed with graves for a considerable distance, the probable result of some endemic disease which induced the survivors to desert the spot. The finest lemon and citron trees, Captain HANNAY had ever seen, were found here, and the tea plant was also very plentiful—the leaf is large, and resembles that sold in *Ava* as pickled tea; the soil in which it grew most luxuriantly is described as of a "reddish-colored clay." Thus far, a considerable portion of the route had passed either directly over the bed of the *Mogaung* river or along its banks; but at *Tsadozout*, they crossed it for the last time, and at this spot it is described as a mere hill stream with a "bed composed of rolled pieces of sienite and serpentine, with scales of mica in it." The navigation of the river even for small canoes ceases below this spot, and those which had accompanied the party with supplies were left, from inability, to convey them further.

About four miles north of *Tsadozout* "the road ascends about 100 feet, and passes over a hilly tract, which seems to run across from the hills on the east to those on the west, and is called by the natives *Tsambú toung*, (the *Mount Samú* of the maps.) This transverse ridge evidently forms the southern limit of the *Húkong* valley, and streams flow from it both to the north and south; the former making their way to the *Khyendwen*, and the latter to the *Mogaung* river.

"*Tsambú-toung*," says Captain HANNAY, "is covered with noble trees, many of which, I think, are sál, and are of immense height and circumference. The tea-plant is also plentiful, besides a great variety of shrubs which are quite new to me. The rays of the sun seem never to penetrate to the soil of *Tsambú-toung*; it may therefore be easily imagined how damp and disagreeable it is, more particularly as there is a peculiar and offensive smell from a poisonous plant which grows in great abundance in this jungle, and the natives tell me that cattle die almost immediately after eating it."

On the 30th the party descended from the encampment on the northern face of this ridge, to the Singpho village of *Walobhúm*, and finally encamped on the left bank of the *Edíkhyoung*, about three furlongs distant from *Moinkhwon* or *Múngkhúm*, the capital of the *Húkong* valley, "where," says Captain HANNAY, "our journey must end for the present; as, besides having no provisions, the men composing the force are so completely worn out with fatigue, that I

am certain they could not proceed further without a halt of some days." This interval Captain HANNAY assiduously employed in collecting information regarding the valley, which had from a very early period been an object of great geographical interest, as the site of the *Payendwen* or amber mines, and at no very remote era probably formed the bed of an alpine lake, which, like that of the *Manipur* valley, has been subsequently raised to its present level by long continued alluvial deposits, and detritus, from the hills which encircle it on every side. The tendency of every such deposition is to raise the level of the water, and facilitate its drainage, until it becomes so shallow, that evaporation suffices to complete the process, and render the soil a fit abode for future races of men. The numerous and extensive lakes in the mountainous regions of *Thibet* and *Tartary* are doubtless undergoing a similar change, and no great stretch of imagination is necessary to anticipate the period when they will become the sites of extensive towns and villages, and present a striking contrast to the rugged magnificence and solitary grandeur of the snowy regions which surround them.

"The valley of *Hûkong* or *Payendwen*," says Captain HANNAY, "is an extensive plain, bounded on all sides by hills; its extent from east to north-west being at least 50 miles, and varying in breadth from 45 to 15 miles, the broadest part being to the east. The hills bounding the valley to the east are a continuation of the *Shuédoung-gyí* range, which is high, commences at *Mogaung*, and seems to run in a direction of N. 15 E." The principal river of the valley is the *Numtunaee* or *Khyendwen*, which flows from the *Shuédoung-gyí* range, and after receiving the contributions of numerous small streams quits the valley at its north-western corner, and again enters the defiles of the hills, beyond which its course is no longer perceptible. On the western side of the valley there are but few villages, and these thinly inhabited, the capital itself containing not more than thirty houses; but the north and eastern sides are said to be very populous, the houses in those quarters being estimated at not less than 3000, nearly all of which are situated on the banks of the *Towang* and *Debee* rivers. All the low hills stretching from the western foot of the *Shuédoung* range were under cultivation, and the population is said to extend across to the banks of the *Irawadí*, in numbers sufficient to enable the Singphos when necessary to assemble a force of nine or ten thousand men.

"With the exception," says Captain HANNAY, "of the village of *Meinkhwon*, which has a Shán population, the whole of the inhabitants of the valley are Singphos and their Assamese slaves. Of the

former, the larger proportion is composed of the Mrip and Tisan tribes, with a few of the Laphaí clan, who are still regarded as strangers by the more ancient colonists, and can hardly be viewed but with hostile feelings, as this tribe have frequently ravaged *Meinkhwon* within the last six years, and were guilty of the still greater atrocity of burning a priest alive in his *kyoung* or monastery.

Formerly, the population was entirely Shán, and previous to the invasion of *Assam* by the Burmese, the town of *Meinkhwon* contained 1500 houses, and was governed by the chief of *Mogaung*. From that period, the exactions of the Burmese officers have led to extensive emigration, and to avoid the oppression to which they were hourly exposed, the Sháns have sought an asylum in the remote glens and valleys on the banks of the *Khyendwen*, and the Singphos among the recesses of the mountains at the eastern extremity of the valley. This state of affairs has led to general anarchy, and feuds are constantly arising between the different tribes, which the quarrel of the Beesa and Dupha Gaums has greatly contributed to exasperate. No circumstance is more likely to check these feuds, and reclaim the scattered population of the valley, than the establishment of a profitable commercial intercourse with the more equitably governed valley of *Assam*, with which communication is now becoming more intimate than at any previous period.

Of the mineral productions of the *Húkong* valley, enumerated by Captain HANNAY, the principal are salt, gold, and amber: the former, he informs us, is procured "both on the north and south sides of the valley, and the waters of the *Namtwonkok* and *Edi* rivers are quite brackish from the numerous salt springs in their beds.—Gold is found in most of the rivers, both in grains and in pieces the size of a large pea. The rivers which produce it in greatest quantity and of the best quality are the *Kapdúp* and the *Namkwún*: the sand of the former is not worked for this mineral, I am told, but large pits are dug on its banks, where the gold is found, as above mentioned. Besides the amber, which is found in the Payen-toung, or amber mine hills, there is another place on the east side of the valley called *Kotah-bhúm*, where it exists in great quantities, but I am informed that the spot is considered sacred by the Singphos, who will not allow the amber to be taken away, although it is of an inferior description." Specimens of coal, were also found by Captain HANNAY in the beds of the *Nambhyú* and *Edi* rivers; and he learnt from the natives that, in the *Namtarong*, a great quantity of fossil wood was procurable.

In its relation to *Assam* and *China*, the trade of the *Húkong* valley naturally attracted a share of Captain HANNAY's attention, and from his account it appears that "the only traffic of any consequence carried on in this valley is with the amber, which the Singphos sell to a few Chinese, Chinese-Sháns, and Chinese Singphos, who find their way here annually. The price of the common or mixed amber is $2\frac{1}{2}$ ticals a vis or four rupees per one and a half seer: but the best kind and what is fit for ornaments, is expensive, varying in price according to its color and transparency*."

"The Chinese sometimes pay in silver for the amber, but they also bring with them warm jackets, carpets, straw hats, copper pots, and opium, which they give in exchange for it. They also barter their merchandize for ivory and gold dust, but only in small quantities. A few individuals from the Burman territories likewise come here, with cloths of their own manufacture, and also a small quantity of British piece goods for sale. But as they are obliged on their way hither to pass through the country of the most uncivilized of the Kakhyen tribes, they seldom venture to come. The greatest part therefore of British and Burman manufactures which are used in this valley, are brought from *Mogaung* by Singpho merchants. But I understand that within the last few years, several of them have gone to *Assam* with gold dust, ivory, and a little silver, for which they receive in return muskets, cloths, spirits, and opium. The following is a list of British piece goods now selling at *Meinkhwon*—common book-muslin used as head dresses, 14 rupees a piece; coarse broad cloth worn as shawls, $2\frac{1}{2}$ yards long, 18 rupees each; good cotton handkerchiefs, 4 rupees a pair; and coarse ones, $2\frac{1}{2}$ rupees a pair. These are the prices of goods bought at *Ava*, but what similar articles from *Assam* may cost, I cannot ascertain. The broad cloth, however, that I have seen from the latter place is of a very superior quality. The merchants who come to this valley from the Burman territories are natives of *Yo*, and the man who is now selling goods here has frequently visited *Calcutta*. The dress worn by the *Singphos* of this valley is similar to that of the Sháns and Burmans of *Mogaung*, but they frequently wear jackets of red camlet, or different velvets which they ornament with buttons, and those who can afford it wear a broad-cloth shawl. The arms in common use amongst them are the *dhá* (or short sword) and spear. The women wear neat jackets of dark coarse cotton cloth, and their *thamines* or petticoats are full and fastened round the waist with a band, being altogether a much more modest dress than that worn by the

* Specimens in matrice are deposited in the Society's Museum.—ED.

Burman women. Those who are married, wear their hair tied on the crown of the head like the men, but the younger ones wear theirs tied close to the back of the neck, and fastened with silver pins—both married and single wear white muslin turbans. The ornaments generally worn by them are amber ear-rings, silver bracelets, and necklaces of beads, a good deal resembling coral, but of a yellowish color, and these are so much prized by them that they sell here for their weight in gold."

During his stay at *Húkong*, Captain HANNAY was visited by many Singphos from the borders of *China*, from whom he learnt that the *Sginmaekha* river rises in the mountains bounding the plain of *Khanti* to the north, and is inclosed on the east by the *Goulang-sigong* mountains, which they consider the boundary between *Burmah* and *China*. This river is, on the same authority, pronounced not to be navigable even for canoes, and the most satisfactory confirmation is afforded of the accounts of Captain WILCOX*. Several smaller streams fall into the *Sginmaekha* from the *Shuédoung-gyí* hills on the west, and the name of *Sitúng* is given to the tract of country through which they flow. In this district gold is very plentiful, and it is found, says Captain HANNAY, "over the whole tract of mountainous country, above the *Sginmaekha*. The Chinese visit this locality for the purpose of procuring the gold, and give in exchange for it, warm clothing, carpets and opium."

Of the several routes by which communication is kept up between the inhabitants of *Húkong* and the countries around, the principal appear to be, one leading across the *Shuédoung-gyí* range to the eastern Singphos; a second, called the *Lye-gnep-bhúm* road, winds round the base of the mountain of that name, and leads in sixteen days to *Múnglang*, the capital of the *Khanti* country, which was visited by Captain WILCOX.

The most important one, however, with reference to trade, lies in a south-east direction from the *Húkong* valley, from which the district of *Kakyo-wainmo* is not more than eight days' march distant. By this route the Chinese frequently travel, and it affords a very satisfactory proof that intercourse may be held direct with *China*, without the necessity of following the circuitous route by *Mogaung*.

* Although Captain WILCOX (As. Res. vol. xvii. p. 463), relying on the accounts given by Singphos of this river, appears to have formed rather an exaggerated estimate of *its size*, his conjectures as to the position of *its sources* are fully verified by the statements made to Captain HANNAY.—R. B. P.

Among the several races of people inhabiting the valleys through which the principal rivers flow, the Khantis or Khumptis hold a very conspicuous rank: they are represented as a fine, brave, and hardy race of men, and are held in great apprehension by the Burmahs, who, about three years ago, attempted to raise revenue amongst them: the force detached on this duty, however, met with such determined resistance, that it was compelled to return, and no subsequent attempt has been made on their independence. They are in constant communication with the Khunúngs, a wild tribe inhabiting the mountains to the north and east, from whom they procure silver and iron. "The former is found in a mine, said to be situated on the northern side of the mountains, to the north-east of *Khanti*." All the information Captain HANNAY could obtain led him to suppose that this mine was worked by people subject to *China*, and from the description given, he thinks they are Lamas, or people of *Thibet*. The part of the Chinese territories north-east of *Khanti* is known at *Húkong* by the name of *Múngfan**, and the Khantis have no communication with it but through the Khunúngs.

From *Meingkhwon*, Captain HANNAY obtained a view of the hill, near which lie the sources of the *Urú* river, one of the principal affluents of the *Ningthí* or *Khyendwen*: it bore south 35° west from *Meingkhwon*, and was about 25 miles distant. It is in the vicinity of this spot that the most celebrated mines of serpentine are situated, and their position is thus described by Captain HANNAY.

"A line drawn from *Mogaung* in a direction of N. 55 W. and another from *Meingkhwon* N. 25 W. will give the position of the serpentine mine district. The Chinese frequently proceed to the mines by water for two days' journey up the *Mogaung* river, to a village called *Kammein*, at which place a small stream called *Engdau-khyoung*, falls into the *Mogaung* river. From thence a road leads along the *Engdau-khyoung* to a lake several miles in circumference called *Engdau-gyí*, and to the north of this lake eight or nine miles distant are the serpentine mines. The tract of country in which the serpentine is found extending 18 or 20 miles." There is, however, another more direct

* In the second volume of DU HALDE'S "China," p. 385, the Père Regis thus describes the tribe by which this tract of country is inhabited, and its geographical site:

"The most powerful among the Tartar Lamas are those called by the Chinese *Moongfan*, who possess a wide territory in *Tibet*, north of *Li Kyang-lú-fu*, between the rivers *Kincha-kyang* and *Vu-lyangho*. This country was ceded to them by USANGHEY (whom the Manchews made king of *Yunan*) to engage them in his interest."—R. B. P.

route from *Kam-mien* which runs in a north-westerly direction. The whole tract of country is hilly, and several hot and salt springs are reported to exist near the *Engdau-gyí* lake, which is said to cover what was once the site of a large Shán town called *Tumansye*. The natives affirm that it was destroyed by an earthquake, and from the description given of a hill in the vicinity, the catastrophe may have been produced by the immediate agency of volcanic action.

On the 21st of March, Captain HANNAY visited the amber mines, and his description is the first that has ever been given of the locality from whence the Burmans obtain this mineral.

"We set out at 8 o'clock," he says, "in the morning, and returned at 2 P. M. To the foot of the hills the direction is about south 25° west, and the distance three miles, the last mile being through a thick grass jungle, after which there is an ascent of one hundred feet, where there is a sort of temple, at which the natives, on visiting the mines, make offerings to the ngats or spirits. About a hundred yards from this place, the marks of pits, where amber had been formerly dug for, are visible, but this side of the hill is now deserted, and we proceeded three miles further on to the place where the people are now employed in digging, and where the amber is most plentiful. The last three miles of our road led through a dense small tree jungle, and the pits and holes were so numerous that it was with difficulty we got on. The whole tract is a successsion of small hillocks, the highest of which rise abruptly to the height of fifty feet, and amongst various shrubs which cover these hillocks the tea plant is very plentiful. The soil throughout is a reddish and yellow colored clay, and the earth in those pits, which had been for sometime exposed to the air, had a smell of coal tar; whilst in those which had been recently opened, the soil had a fine aromatic smell. The pits vary from six to fifteen feet in depth, being, generally speaking, three feet square, and the soil is so stiff that it does not require propping up."

"I have no doubt," Captain HANNAY adds, "that my being accompanied by several Burmese officers, caused the people to secrete all the good amber they had found. For although they were at work in ten pits, I did not see a piece of amber worth having. The people employed in digging were a few Singphos from the borders of *China* and of this valley. On making inquiry regarding the cause of the alleged scarcity of amber, I was told that, want of people to dig for it was the principal cause; but I should think the inefficiency of the tools they use was the most plausible reason:—their only implements being a bambú sharpened at one end, and a small wooden shovel."

"The most favorable spots for digging are on such spaces on the sides of the small hillocks as are free from jungle, and I am told that the deeper the pits are dug, the finer the amber; and that that kind which is of a bright pale yellow, is only got at the depth of forty feet under ground."

A few days subsequent to this examination of the amber mines, Captain HANNAY visited the *Numtunaee* or *Khyendwen*, which flows through the valley about five miles north of *Meingkhwon* in this part of its course; and at this season of the year the stream, as might have been anticipated, is small, but in the rains Captain HANNAY estimates that its breadth must be 300 yards from bank to bank, and it is navigable throughout the year for large canoes. An island in the centre of the bed was covered with the skeletons of large fish, which had been destroyed by the poisonous quality of the fallen leaves of overhanging trees:—the natives eat the fish so killed with impunity.

After waiting several days at *Meingkhwon*, in anticipation of the return of some messengers who had been sent into *Assam*, and suffering extreme inconvenience from the difficulty of procuring adequate supplies for the force, the Myo-wún began seriously to think of returning to *Mogaung*. All expectation of prosecuting the journey into *Assam* had been relinquished, and the Dupha Gaum having voluntarily come into the camp, was received by the Burman governor with a civility and distinction, extorted by his apprehension of the numerous Singphos ready to support their redoubtable chieftain, whose influence is said to extend to the frontiers of *China*. On the first of April the ceremony was performed of swearing in the different Tsobuas (tributary chiefs) to keep the peace, which is thus described by Captain HANNAY.

"The ceremony commenced by killing a buffaloe, which was effected with several strokes of a mallet, and the flesh of the animal was cut up to be cooked for the occasion. Each Tsobua then presented his sword and spear to the spirits of the three brother Tsobuas of *Mogaung*, who are supposed to accompany the governor of the above named place, and to inhabit three small huts which are erected on the edge of the camp. Offerings of rice, meat, &c. were made to these *ngats* or spirits, and on this being done, each person concerned in taking the oath received a small portion of rice in his hand; and in a kneeling posture, with his hands clasped above his head, heard the oaths read both in the Shán and Burmese languages. After this, the paper on which the oaths were written was burned to ashes, and mixed with water, when a cup full of the mixture was given to each of the Tsobuas

to drink, who, before doing so, repeated an assurance that they would keep the oath, and the ceremony was concluded by the chiefs all sitting down together and eating out of the same dish." The chieftains to whom this oath of forbearance was administered were the Thogyee of *Meingkhwon*, a Shán—the Dupha Gaum, a *Tesan* Singpho—the Panwah Tsobua, a *Laphaee* Singpho—the Sitúngyen Gaum, and Wengkeng-moung, *Mirip* Singphos—and Tare-poung-noung, a *Tesan* Singpho,—all of whom, by this act, virtually acknowledged the supremacy of the Burman authorities, and their own subjection to the kingdom of *Ava*.

The new governor having succeeded by threats and the practice of every art of extortion, in raising as large a sum as it was possible to collect from the inhabitants of the valley and surrounding hills, announced his intention of returning to *Mogaung*; and on the 5th of April no intelligence having been received from *Assam*, Captain HANNAY left *Meingkhwon* on his return to *Ava*, with a very favorable impression of the Singphos he had seen, who appear to possess great capabilities of improvement, and whose worst qualities are represented as the natural result of the oppressive system of government under which they live. One of their chieftains in conversation with Captain HANNAY furnished a clue to the estimation in which they held the paramount authorities around them by the following remark. "The British," he said, "are honourable, and so are the Chinese. Among the Burmans you might possibly find one in a hundred, who, if well paid, would do justice to those under him. The Shán of *Mogaung*," he added "are the dogs of the Burmans, and the Assamese are worse than either, being the most dangerous back-biting race in existence."

On the 12th of April, Captain HANNAY reached *Mogaung*, and some boats arriving shortly afterwards from the serpentine mines, he availed himself of so favorable an opportunity of acquiring some additional information regarding that interesting locality. He found the boats laden with masses of the stone so large, as to require three men to lift them. The owners of the boats were respectable Chinese Musalmáns, who were extremely civil, and readily answered all the questions put to them by Captain HANNAY, who learnt "that, although the greater number of Chinese come by the route of *Santa* and *Tali*, still they are only the poorer classes who do so: the wealthier people come by *Bamo*, which is both the safest and the best route. The total number of Chinese and Chinese Shán who have this year visited the mines is 480."

"I have made every inquiry," adds Captain HANNAY, "regarding the duties levied on these people, both on their arrival here and on their purchasing the serpentine, and I am inclined to think that there is not much regularity in the taxes, a great deal depending on the value of the presents made to the head-man. Formerly, the Chinese were not allowed to go to the mines, but I understand the following is now the system carried on in this business.

"At particular seasons of the year, there are about 1000 men employed in digging for serpentine: they are Burmahs, Shâns, Chinese-Shâns, and Singphos. These people each pay a quarter of a tical a month, for being allowed to dig at the mines, and the produce of their labour is considered their own.

"The Chinese who come for the serpentine, on their arrival at *Mogaung*, each pay a tax of from $1\frac{1}{2}$ to $2\frac{1}{2}$ ticals of silver, for permission to proceed to the mines, and $1\frac{1}{2}$ ticals a month during their stay there. Another duty is levied on the boats or ponies employed in carrying away the Serpentine, but this tax varies according to circumstances; and on the return of the Chinese to *Mogaung*, the serpentine is appraised and a tax of 10 per cent. taken on its value. The last duty levied is a quarter of a tical from every individual, on his arrival at the village of *Tapo*, and there the Chinese deliver up all the certificates they have had, granting them permission to proceed to the mines."

On the 9th of April, no intelligence having been received of the messengers sent into *Assam*, Captain HANNAY determined to return to *Ava*, and, embarking on a small boat, he reached *Bamo* in eight days, and arrived at *Ava* on the 1st of May. The time occupied in returning from *Meingkhwen* to *Ava* was only eighteen days, while the journey to that frontier post was not completed in less than forty-six of actual travelling,—a very striking proof of the extreme difficulty of estimating the distance between remote points, by the number of days occupied in passing from one to the other, unless the circumstances under which the journey was made are particularly described. That portion of the route between *Meingkhwen* and *Beesa* in *Assam*, which Captain HANNAY was prevented visiting, will probably in a short time be as well known as the territory he has already so successfully explored, and the researches in which he is now engaged, extending from *Beesa* in *Assam* to *Meingkhwen* in the *Hukong* valley, will complete the examination of a line of country not surpassed in interest by any, which our existing relations with the empire of *Ava* have afforded us an opportunity of visiting. His labours have

filled the void necessarily left in the researches of WILCOX, BURLTON, and BEDFORD, and have greatly contributed to dispel the doubt and uncertainty, which they had not the opportunity of removing. While the officers of the *Bengal* Presidency have been thus successfully engaged in geographical inquiries on the north of *Ava*, the south and western districts have been explored with equal zeal and intelligence by those of the *Madras* Presidency; and the spirit of honorable competition, which has already stimulated the researches of Drs. RICHARDSON and BAYFIELD, and Lieutenant MACLEOD, with such marked advantage, bids fair, in a comparatively short time, to render the whole empire of *Ava* better known than the most sanguine could have ventured to anticipate. Did the results of such journies and investigations tend only to an increase of our geographical knowledge, they would even then be most valuable: but to suppose that the consequences of this intercourse between intelligence and ignorance are so limited, is to take a most inadequate view of the subject: the confidence inspired by the visits and conduct of a single individual*, has already opened a communication between *Yunan* and *Maulmein*, and the caravans of *China* have commenced their annual visits to the British settlements on the coast: the journey of Captain HANNAY will in all probability lead to a similar result between *Assam* and the northern districts of *Yunan*; and the time may not be very distant, when British merchants located at *Bamo*, will, by their superior energy and resources, extend its now restricted trade to surrounding countries, and pave the way for ameliorating the condition and enlightening the ignorance of their numerous inhabitants.

II.—*Facsimiles of Ancient Inscriptions.* By JAS. PRINSEP, *Sec. &c.*

[Continued from page 223.]

The subject selected for this month's illustration is a slab of dark stone, marked No. 6 in the Society's museum. Nothing is there recorded of its origin; but the character in which it is cut, (as may be seen by the lithographed specimen in Pl. XVII.) is the same as that published in February (Pl. VII.) from a similar stone of a somewhat smaller size; and which publication has led, in rather a singular manner, to the discovery of the source whence both were derived.

Lieut. KITTOE, as I have before mentioned, was lately requested on the part of the Society to re-examine the inscription on the *Khandgiri*

* Dr. RICHARDSON of *Madras*.—R. B. P.

rock, published in STIRLING's memoir on *Cuttack* (As. Res. XV.) In doing this, he came most unexpectedly upon a number of highly curious ancient temples and inscriptions, of which he hastened to make drawings and facsimiles. He found himself impeded and foiled by the bráhmans of the spot, who even went so far as to abstract one of the copies which had cost him the most labour. Upon seeking the cause of so unusual a want of courtesy, the priests told him how their images and relics had been carried off by former antiquaries, and pointed out whence the commemorative slab had been actually cut out from the temples of *Ananda Básu deva* at *Bhubaneswar* by a late *Colonel Sahib*. The dimensions of the slab and the subject of invocation tallied so exactly with the inscription translated by Captain MARSHALL, that Lieut. KITTOE wrote to me on the subject, and on referring to the list of donations at the end of the eleventh volume of Researches, I find General STEWART set down as the donor of "two slabs with inscriptions from *Bhubaneswar* in *Orissa*."

There was nothing in the first of the two whence we could guess its locality; the person noted as the founder of the temple being a private individual, named BHATTA SRI' BHAVA-DEVA; but in the slab, now confidently conjectured to be its companion, we have a rája's name and ancestry which ought to afford a better clue.

This king appears in the 15th verse as ANIYANKA BHIMA, the brother of "an excellent man" who had come to the throne through marriage with SURAMA', the daughter of AHIRAMA, whose parentage is nameless, and recorded only as "the ornament of their race."

On referring to STIRLING's catalogue of the princes of *Orissa**, we find this very person, under the name of ANANGA BHIM DEO, ascending the *Gajapati* throne, out of the direct line, in 1174 A. D. He was one of the most illustrious princes of the *Gangavansa* line, the FIROZ of his day, for the number and variety of the public works he erected. "Having unfortunately incurred the guilt of killing a bráhman, motives of superstition prompted him to construct numerous temples as an expiation for his offence;" and probably this of *Bhubaneswara* was one of them. The date of rája ANANGA BHIMA also agrees closely with what was assumed from the style of the alphabet, and the "Samvat 32" of the *Basu-deva* slab. It will hence become a question, whether these figures are, in all cases, to be referred to a *Cuttack* era, or whether the same Deva-Nágari alphabet was in use

* See Useful Tables, page 113; or As. Res. XV. 269.

from *Shekavati** to *Benares, Dinajpur*, and *Orissa*, in the 12th century, while each prince had then an era of his own.

The writer, UDAYANA, whose poetic style is more than usually florid and inflated, is, I am told by the pandits, an author of a work on logic entitled the कुसमाञ्जलि *kusamánjali*, which is in much repute in the schools. We have a copy in the Society's library.

I am once more indebted to the Reverend Mr. YATES for undertaking the translation of this very lengthy document. It was previously transcribed without difficulty by the Society's pandit. The only letter which was remarked as unusual in form, is the ह of इति, at the end of the fourth line of the lithograph. It bears a strong resemblance to the corresponding letter of the *Amarávatí* and more southern alphabets.

I cannot conclude these preliminary remarks without animadverting upon the ruthless spoliation which is often carried on by soidisant antiquaries, to the direct perversion of the true object of research—the preservation of ancient monuments, and their employment to elucidate the history of the country. The facts told by these two *Bhubaneswara* stones were utterly unintelligible, until accident pointed out whence they had come—and the local history of the temples was or would have been equally lost in another generation. It is to be hoped therefore that the Asiatic Society will hasten to restore them to their former positions. Such an act will contribute tenfold to the true objects of our institution by the confidence it will inspire in the minds of the people who now watch our explorers with jealousy, and withhold valuable information, lest it should only yield to fresh acts of plunder and demolition†.

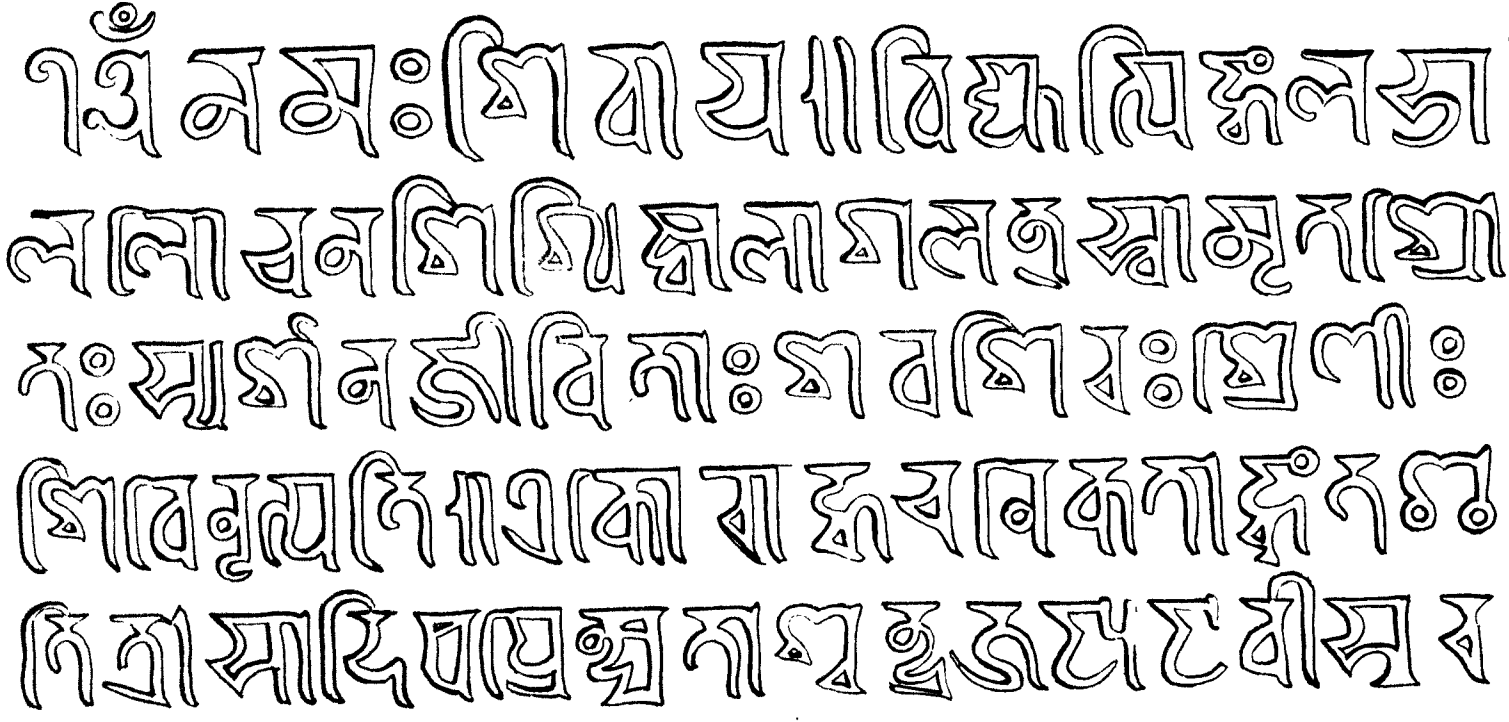
Transcript in modern Deva-Nágarí.

नमः शिवाय। विद्युत्पिङ्गलभाललोचनशिखिज्वालागलत्स्वामृत स्रोतःस्पर्शनजीविताः शिवशिरःश्रेणीः शिवे न्यस्यति। एको राजरनेकताङ्कत इति त्रासादिव प्रत्य तान्चन्द्रः सान्द्रजटाटवीसुरसरिद्दुर्गाश्रितः पातु वः॥ १॥

* See the *Harsha* inscription, in nearly the same character, Vol. IV. 361.

† Since writing the above, I am happy to perceive that the Society has determined on the immediate restitution of the two slabs through Lieut. KITTOE, who has been requested to explain that their removal was the act of an individual, and would never have had their sanction, unless they had been assured that the objects were going to decay, or held in no estimation where they were.

Facsimile of the commencement of Inscription № 6 in the As Soc. Museum



Dimensions, 2 ft. by 4.

J. Prinsep. Lith.

Vol. VI. Part.

कोऽयं ललाटतटनेचपुटस्य गर्व्वात्खर्व्वीकरोति जगदित्यभिधाय
ग्रस्मौ। यः साभ्यसूयमकरोच्चरणेऽखिलक्ष्मीं जीयात्स गौतममुनि
र्मुनिवृन्दवन्द्यः ॥ २ ॥

तद्वंशे राजपुत्रः समजनिजगतीमण्डनः पण्डितानां मान्यः पुण्यैक-
धाम प्रतिबलजलधिक्षोभमन्थाचलश्रीः। श्रीमान् सत्कीर्त्तिवल्लीवलयि-
तवसुधामण्डलश्चण्डरश्मिस्फूर्ज्जत्तेजोभिरुद्यन्नलपतिरिपुयशःकैरवोद्धार
देवः ॥ ३ ॥

समजनि निजवंशोत्तंसलक्ष्मीरलक्ष्मीकृतनिखिलविरोधिस्पूज्जदम्भोधि
रस्मात्। दलितललितमल्लीकीर्त्तिवल्लीवितानप्रहृतहसितचन्द्रो मूलदेवः
क्षतोन्द्रः ॥ ४ ॥

तस्मात् पुण्यैकराशेरभवदविरमो नाम धाम स्तुतीनामारामः साम
नीतेरपरिमितयशःपूरचन्द्रोदयाद्रिः। यस्योद्यद्दानधर्म्मोत्सवजनित
महोत्साहकाले त्रिलोकप्रासादाग्रे स्फुरन्ति स्फुरदमलयशोवैजय-
न्त्यो जयन्त्यः ॥ ५ ॥

तस्मान्नैकसुताढ्यभूवतुरपान्नाथादिवेन्दुश्रियौ श्रीस्वप्नेश्वरनाम नाम
सुरमादेवी च सार्धाङ्गया। एकः क्ष्मातलमण्डनाय सकलाधारस्तथा-
न्याजगत्दारिद्र्यज्वरनाशनाय जगत् चिन्तामणिश्रीरभूत् ॥ ६ ॥

नतन्दपतिकिरीटकोटिरत्नद्युतिपदपीठशयालुपादपद्मः। अजनि
रजनिजानिवंशचूड़ामणिरणिमादिगुणेन चोढगङ्गः ॥ ७ ॥

याचावाजिखुरप्रहारविसरद्धूलीसमुद्रे स्फुरत्तेजोभास्करमण्डल
क्षितिभुजामस्तङ्गते निर्भरं। यं संग्रामगृहोदरेषु विजयश्रीः सार्द्धं
माशासखीवृन्दैर्भिन्नगजेन्द्रमौक्तिकवती भूयोऽभिसर्त्तुं गता ॥ ८ ॥

रेबालाः कुलवृद्ध किन्नु भवतां दुर्भिक्षमायास्यति स्फीतं किं सतु स-
च्चदः पलभुजां स्वर्गाय सन्नह्यते। यस्येति श्रुतिमाकलय्य समरे निर्भिन्न
वीरद्विषाम्बल्लरैः परिपूरयन्ति परितः प्रेताः कुशूलोत्करान् ॥ ९ ॥

तस्मिन् पुरन्दरपुरीतिलकायमाने दाने ससुन्नतमतिस्तनयस्तदीयः।

साम्राज्यभारवहनैकधुरीणबाहुः श्रीराजराजनृपतिः पृथिवीं शशास ॥ १० ॥

यस्योद्यदाजिराजीखुरशिखरभरच्छम्भूचक्रसर्पद्भुजीजालावकीर्णे चिदशपुरसरिद्भूरिपङ्के विलग्नं। नीरक्रीडानिमज्जत्सुरपतिकरिणं व्याकुलाः शक्रभट्या धृत्वा लाङ्गूलमेके करतलमपरे तीरमुत्तोलयन्ति ॥ ११ ॥

रणभुवि यदि नित्यन्नाहतः शत्रुसार्थस्तुलितहरिभुजेन क्ष्माभुजाऽनेन नूनं। कथमिह कलिकाले कल्पितानल्पपापप्रणयिनि सुरहस्तिः खक्षुरस्यान्दिवि स्यात् ॥ १२ ॥

येनोढा पुरुषोत्तमेन सुरमादेवी रमैवार्यतो नाम्नाऽन्तःपुरसुन्दरी जनशिरोरत्नाङ्कुरश्रीरियं। प्रत्यारुह्य तुलाः प्रियेण सहसा यत्सम्मं शैलान्ददावेतैः स्फीततराधरार्थिभिरहो जातार्थिनी केवलं ॥ १३ ॥

सर्व्वं नरेन्द्रतिलकः कलिकालकल्पशाखासुखौघमनुभूय चिरं स राजा। वृद्धोऽनुजं मनुजराजनतांघ्रियुग्मं राज्येऽभिषिक्तमकरोदनियङ्कभीमं ॥ १४ ॥

स श्रीमाननियङ्कभीमनृपतिः साम्राज्यलक्ष्मीपतिः प्रत्यर्थिक्षितिपालमौलितिलकस्यक्ताङ्घ्रिकान्तालकः। सम्प्राप्यैव समुद्रमुद्रितमहीचक्रं कराग्रस्फुरच्चक्रं शक्रपराक्रमः समकरोद्राज्यं नृचन्द्रः क्षणात् ॥ १५ ॥

हे भोगीन्द्र किमात्थ कुर्म्म धरणीभारः स तुच्छो महान् जानासि त्रिकलिङ्गनाथयशसा ख्यातं न जाने शृणु। देवेऽस्मिन् विजयप्रयाणरसिके प्रेङ्खत्तुरङ्गक्षुरक्षोभाद्भूतरजोभिरम्बरमगादर्द्धं क्षमामण्डलं ॥ १६ ॥

जाता सङ्गरनीरधेः स्फुरदसिव्यालेन्द्रभास्वद्भुजा मन्थाद्रेरसतीव वाञ्छितबद्धप्रीतिः सदा श्रीरियं। अस्मिन्नेव नराधिनाथतिलके स्थैर्य्यं गता यत् पुनर्वीजं तत्र किलास्य शाश्वतमसौ जाग्रद्यशश्चन्द्रमाः ॥ १७ ॥

उद्यद्दिग्विजयार्थसाधनविधौ गङ्गान्वयख्याभुजान्दिव्यास्त्रं चतुरङ्ग-
तोऽधिकतरः सैन्यात्सएकोऽभवत्। श्रीखड्गेश्वरदेव एव विलसत्प्रस्त्र
क्षतारिस्त्रीकीलालौघविनिर्म्मिताऽममहाम्भोधिर्नयाम्भोनिधिः ॥ १८॥

लक्ष्मीदेव्याः पतिरयमधोऽनेन चक्रे वलिद्विट् गोपालस्य प्रियसुहृदयं
सर्व्वकार्य्येष्वच्युतोऽसौ। विश्वक्सेनो धरणिरियमप्युद्धृता येन मग्ना
अस्मिन् जन्मन्यपि सुचरितैरेष विश्वम्भरोऽभूत् ॥ १९॥

यद्दानविगलद्वारिमाऽका भूतमाऽका सस्यसम्पत्तिसम्भारैर्दीन
हीनाऽभवन्मही ॥ २०॥

कैलासाद्रिहिमाचलस्त्रनतटव्यासङ्गिमन्दाकिनीहारश्रीर्यदकीर्त्तिरस्य
तिलकं चन्द्रं कलङ्काश्रयात् ॥ ज्योत्स्नाहासमुखीपयोधिरसना कुन्दद्युतिं
नात्यजत् क्वायं स्यादिह चन्द्रशेखरपदारूढो मृड़ानीपतिः ॥ २१ ॥

भक्तिप्रह्वसुरासुरेन्द्रविलसन्मौलिस्फुरत्नावलीच्छायाशबलधनुःस्फुरत्य
दलसत् मेघेश्वरस्यामुना। उन्नत्याऽपरपर्व्वतो बहुतरद्रव्यव्ययं कुर्व्वता
प्रासादो रचितः सुधाच्छविहसत्कैलासशैलेश्वरः ॥ २२ ॥

स्वर्णाद्रिः ससुरालयो हरिखुरक्षुण्णश्च पूर्व्वो गिरिर्वारुण्या परिचुम्बि
तोऽस्तशिखरो मान्यः स गौरीगुरुः। इत्यद्यापि परामृशन्नवनवस्थानं
चलन्मन्दिरो लङ्केन्द्रेण शिलोच्चयं गृहमदः प्राप्तोऽनवद्यं शिवः ॥ २३ ॥

इह विजयिना प्राकारश्रीर्म्महोपलनिर्म्मिता जलधरगतीरत्युन्नत्या
निरोद्धुमिवोद्यता। कलिजलनिधेर्म्मर्य्यादालीभयादिव तस्य वै शरणम
विशद्भिर्भो यच्च जिनेचसुरक्षया ॥ २४ ॥

यासां नेचाश्चलतरलिमा विश्ववश्यैकमन्त्रः पादन्यासस्त्रिभुवनगतिस्त्र
भनं संविधते। इत्यारम्भे वलयमणिभिर्निर्म्मिताऽयत्नदीपास्त्रस्यै दत्ता
स्त्रिपुरजयिने तेन तास्त्रा मगाद्याः ॥ २५ ॥

उपवनमथ चक्रे तेन मेघेश्वरस्य स्फुरितकुसुमरेणुश्रेणिचन्द्रातपश्रि।
अविरतमकरन्दस्यन्दसन्दोहवर्षैर्धृतरतिपतिलीलायन्त्रधाराग्रहत्वं ॥ २६॥

वनश्रीमुक्ताखक्दरदलितपुष्पोत्करमितत्परागैर्भृङ्गालीकलितसिलिमा

यत्र जयन्ती। मुनेः पुण्यास्तस्य स्फटिकघटिताट्टावलिरियं वसन्तोद्यन्मत्त द्विपशिरसि नद्यत्रवितततिः॥ २७॥

अत्यच्छं शरदम्बरात्सुरसरित्तोयाच्च पापापहं गम्भीरन्नयशालिनोपि हृदयात् प्रीतच्च चन्द्रद्युतेः। हृद्यस्वादु सुधारसादपि सरो वारान्निधेः सोदरन्तेनाखानि नरेश्वरप्रणयिना मेघेश्वरस्यालये॥ २८॥

आनन्दैकनिकेतनं नयनयोः शश्वन्मनःकैरवज्योत्स्नौघः खलु विश्व कर्मनिपुणव्यापारवैदग्धभूः। ग्रीष्मग्रासभयातिभातजनतासौन्दर्य दुर्गालयो मार्गः कीर्त्तिविष्टभगस्य जयिना प्रोत्तम्भितो मण्डपः॥ २९॥

अपां शालामालाः पथि पथि तड़ागाः प्रतिपुरं प्रदीपाः सम्पूर्णां प्रतिसुरगृहं यस्य विमलाः। मठा वेदादीनां द्विजपुरविहाराः प्रति दिशं विराजन्ते सत्राण्यपि च परितः सेतुनिवहाः॥ ३०॥

आराद्ब्रह्मपुरं बृहस्पतिपुरस्पर्द्धि स्मरारेः सदाचार्यं विष्णुमभि स्फुरद्द्विजवरग्रामाय धर्म्मात्मने। दत्तं तेन मुदा सदोदितमखप्रारब्ध धूमध्वजस्फूर्जद्धूमचयेन यत्र स कलिव्यालः समुत्सायते॥ ३१॥

तं प्रत्यतिष्ठद्द्विजराजपूज्यः प्रासादमीशस्य सनन्दकश्रीः। सुदर्शने नान्वित एष विष्णुराचार्य्यराजः सदृक् न विष्णोः॥ ३२॥

उदयनकविस्तस्यादेशात्प्रशस्तिविलासिनीं सुललितपदन्यासैः शश्वद्विदग्धमनोहरां। ध्वनिभिरनिशं कण्ठे श्लिष्टामलङ्कृतिहारिणीमतिरसतया शुभ्यायातां प्रसाधितवानिमां॥ ३३॥

यावत् ज्योत्स्नासुधांशू धरणिफणिपतौ यावदम्भोजलक्ष्मौ यावच्च गङ्गाहिमधरणिधरौ यावदेवार्णवोर्मी। वागर्थौ यावदस्मिंस्थिर मनुवसतोऽद्वैतरूपेण लोके तावत् प्रासादकीर्त्ती त्रिभुवनकुहरे राजतामस्य नित्यं॥ ३४॥

। श्री। दिशि धवलधीरतनयः स चन्द्रधवलः प्रशस्तिमिह पट्टे। सरत्नाक्षरमालाभिर्लिलेख मेघेश्वरद्वारे॥ ३५॥

सूत्रधारः शिवकरः सद्वृत्तामक्षरावलीं। निचखान शिलापट्टे मुक्ता फलनिभामिह॥ ३६॥

Translation by the Rev. WM. YATES.

1. Salutation to SHIVA. The row of skulls (on KA'LI') are dancing over SHIVA*, being made alive by the stream of nectar flowing from the bright flame of the eye in his shining forehead. Seeing this, the moon thinking one Ráhu had become many, took refuge in the fortress of *Gangá* amidst the wood of SHIVA's thick hair: may that moon preserve you.

2. "Who is this that from the pride of the eye in his forehead subdues all the world?" May that GAUTAMA, the chief of sages, who in thus addressing SHIVA with detraction, transferred the brightness of his eye into his own foot, live for ever.

3. The prince of his family was the ornament of the world which is the birth-place of all, revered by the learned, the seat of virtue, and glorious as the mountain that churned the mighty ocean. He was glorious: the whole earth was overspread with the creeper of his fame, and he was the eradicator of the white lily of his enemies' glory, which was withered by his powerful rays.

4. He was the ornament of all his race; by him the boisterous host of all opposers was defeated. Hence he outshone the moon, and laid the beautiful spreading creeper of his jasmine-like fame prostrate in the dust. He was the first and chief of all.

5. From this source of virtue sprung AHIRAMA, worthy of praise, the possessor of ethical skill, who by his unbounded glory was like the mountain on which the full moon rises. When he exerted himself in the virtue of liberality, the triumphant banners of his pure and shining honor were resplendent before the palaces of the three worlds.

6. From AHIRAMA were born two individuals, a son and a daughter, like the moon and LAKSHMI' from the sea, and they were fitly named SWAPNESWARA and SURAMA'. The one, as an ornament of the world, was the possessor of all virtues; and the other, as the destroyer of the disease poverty, was like the goddess of wealth.

7. He became the glory of his race, and, like SHIVA, distinguished by endless good qualities. His lotus-like feet rested on a footstool enlightened by gems in the crowns of prostrate kings.

8. When the disk of the glorious sun was shining on the sea of dust excited by the hoofs of his galloping steeds, and setting to opposing kings, then fortune accompanied with companions from all sides, and adorned with the pearls of elephants slain, met him in the midst of the field of battle according to appointment.

9. "Ho! ye young and aged, shall famine ever come to you? am I prepared to offer sacrifice only for the gratification of the eaters of flesh?" Hearing these his words, the evil spirits around filled all their granaries with the flesh of enemies slain in battle.

* SHIVA is here supposed to be prostrate and KA'LI' standing on his breast. He has three eyes, one in his forehead with the crescent of the moon.

10. From him who resembled INDRA, was born a generous son possessed of an arm strong enough to sustain the weight of universal government. This glorious monarch, SRI' RAJARAJA, then governed the world.

11. The servants of INDRA were all confused, one laying hold on the tail and another on the proboscis, were dragging on shore his elephant, which, while sporting in the water, had fallen into the mud that had been collected in the heavenly river from the abundant dust raised by the hoofs of the spirited steeds of this king.

12. If so many enemies had not indeed been constantly killed in battle by this king having an arm like VISHNU, then, in this iron age, in which wickedness so much abounds, how could BRAHMA' have formed so many gods*?

13. SURAMA', which is another word for the goddess RAMA' or LAKSHMI, and who was also called ANTAHPURA-SUNDARI', was the glory of all jewels. She, assimilating quickly with the excellent man whom she married, gave away mountains of gold, and became renowned, and the sole envy of kings.

14. This distinguished king, after enjoying for a long period all the pleasures of the Kali-yuga or iron age, and becoming old, anointed to the kingly office, his younger brother ANIYANKA-BHI'MA, at whose feet other kings bowed.

15. This ANIYANKA-BHÍMA was a renowned monarch, a famous emperor, the supreme ruler over opposing kings, who yet did not seize upon their wives. This moon of men, with strength like INDRA's, having obtained the sea-girt circle of the earth, soon made it like the circular discus held in his hand.

16. Oh, ANANTA†, what say you? The great weight sustained by the tortoise you know is insignificant, but the weight sustained by the glory of the king of the three Kalingas I know not. Hear this! When this king delights to go forth to victory, half the earth rises to heaven in the form of dust excited by the strokes of the hoofs of his fleet steeds.

17. Fortune herself springing from the sea of contest, holding in her hand a sword bright as the king of serpents, and desiring the love of many, like the faithless woman produced by the mountain Mandara, remains constantly with this renowned king: the proof of which is furnished in this, that the moon of his fame is still always shining‡.

18. Like the famous SWAPNESWARA, he went forth to complete the conquest of the world, and was himself *alone* greater than the *complete* armies of the kings descended from GANGA' with all their bright weapons.

* It is supposed that those who die in battle are saved: in these words, the doctrine of Apotheosis, as believed by the Greeks and Romans, is distinctly avowed.

† *Ananta* is the serpent on whose head the earth is supposed to rest: he supports the tortoise that bears the earth.

‡ The moon and *Lakshmi* or fortune are supposed to have been produced by the gods at the churning of the ocean, and to have a common origin and end.

He was the divine treasury of justice, and formed a new ocean by the blood flowing from the foes slain by his bright arms.

19. He was the lord of *Lakshmí** ; the opposer of *Bali* ; the beloved friend of the herdsmen ; the never-failing one in all his undertakings ; the *Vishwaksena* by whom the deluged world was raised ; and the real *Vishwambhara* by his virtuous deeds in life.

20. The earth, the mother of all creatures, was nourished by the streams of his benevolence, and enriched with abundance of corn and wealth.

21. If his fame is bright as the necklace-like river *Mandákiní*, where united with the breast of the *Kailása* and *Himálaya* mountains, then where is SHIVA, ascending to the top of the *Chandra-shikhara* mountain, if he does not remove the stains from that moon, whose smiling face is bright with light as the white jasmine or froth of the ocean?

22. This other great mountain *Kailasa*, abounding with pure nectar, was made a palace by SHIVA's expending the wealth of this INDRA-like king, whose feet were rendered glorious by the rainbow, or reflection of the rays from the gems on the heads of the obedient Surs and Asurs.

23. *Sumeru*, with the residence of the gods, was injured by the hoofs of this king's horses, also the eastern mountains, and the western peaks were touched by *Varuní** : so the venerable SHIVA, seeking after fresh places, and having no settled temple, at last gained, with the king of *Lanká*, this unparalleled mountainous habitation.

24. By this victorious one inclosures were formed so high as to obstruct by their elevation the movements of the clouds. And here virtue by SHIVA's interposition, for fear of the aggression of the sea of wickedness, took refuge.

25. The women, the glance of whose eyes was all-subduing as a *mantra*, and the motion of whose feet made the three worlds motionless ; and whose lamp or light was formed by their bracelets and jewels when they began to dance—these deer-eyed ones were given by this king to SHIVA.

26. By him a garden was made like INDRA's, shining bright with the farina from the full-blown flowers, and constantly watered by the distillation of the juice of flowers, as by the sportive engine of KA'MADEVA‡.

27. The star-like marks on the heads of the elephants that are furious in the spring, are nothing more than the dice spots of the sly KA'MADEVA set in crystal. There the white is made triumphant by the humming bees covered with farina from the scattered flowers, which are the pearls of the necklace of the wood.

* This and the following are metaphors: the meaning is, that he was like the persons mentioned.

† *Varuní* means the western horizon, and also spirituous liquor, by the touch of which a person or thing is defiled.

‡ Cupid.

28. By this kind king an immense pond was cut near his INDRA-like palace. It was in size like the sea; its water was clearer than the autumnal sky, more purifying than the waters of the *Ganges*, more deep than the heart of the profound casuist, more cold than the rays of the moon, and more delicious to the taste than nectar.

29. By this victorious one an open temple was built, and it was the delight of the eyes; the moon-light of the white lily, the mind; the splendid workshop of the celestial artist VISHWAKARMA, the beautiful fort of those afraid of being seized by heat, and the way of him who covets fame.

30. Houses with water were on every road, tanks in every city, lamps full and splendid in every temple, sheds for reading the Vedas, &c. in every direction, the ornaments of the brâhman cities. Sacrifices too and bridges were conspicuous in all directions.

31. By him was given with pleasure to the preserving brâhmans, for residence, a city of BRAHMA', one nearly equal of VRISHASPATI, and one of SHIVA, and one of the venerable VISHNU. There the serpent wickedness was withered by the crackling smoke, the sign of sacrifices commenced.

32. The famous SANANDAKA, the most venerable of brâhmans, remained near this palace. This chief of teachers was in appearance like VISHNU, and differed nothing from him.

33. The poet UDAYANA, by the king's command, wrote this (eulogy) which resembles a fine woman, always charming in the motions of her handsome feet, with harmonious sounds in her throat, adorned with ornaments, and coming with pleasure to my resting place.

34. As long as the moon and its rays, the earth and its supporter, the lotus and *Lakshmí*, *Gangá*, and the supporter of *Himálaya*, the sea and its waves, words and their meaning, abide together in the world, so long the palace and fame of this king will ever shine through the three worlds.

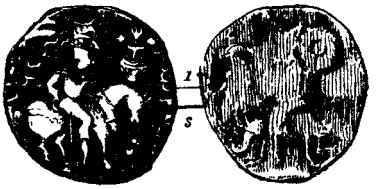
35. SACHANDRA-DHABALA, the son of DHAVALA-DHIVA, wrote this excellent inscription on a slab in jewel-like letters over the door of this INDRA-like king.

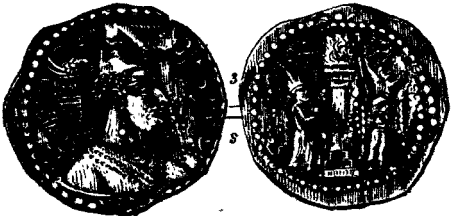
36. The best artist engraved these well arranged words, which resemble pearls, on a stone-slab.

III.—*Specimens of Hindu Coins descended from the Parthian type, and of the Ancient Coins of Ceylon.* By JAMES PRINSEP, *Sec. As. Soc.*

Among the coins extracted from the *Manikyala* tope were two that excited more than ordinary curiosity from their having marginal inscriptions in Sanscrit characters around a device in all other respects of the Sassanian type. The inscription (which will be found in Plate XXI. of vol. III. also p. 439) baffled all attempts to decypher it. The repetition of the word *Srí* left little doubt of its language being

Indo-Sassanian Coins













Dangerfield sculpsit.

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Sanscrit, but neither with the aid of modern nor ancient alphabets could the sentence be made out. The individual letters seemed to be

श्रीहिनिविरषेरभवद्रपविर श्रीयहिनिणवद्वजारि :

Shortly afterwards, among the coins procured for me by KERA'MAT ALI, another instance of the mixture of legends was discovered (Vol. III. Pl. XXV. p. 439); and here the name was clearly श्रीवसुदेव *Srí Vasudeva*, either denoting the god KRISHNA, or the Indian monarch of that name alluded to in the Persian histories. Mr. MASSON's last memoir containing one or two coins of the same class, led to a fresh scrutiny of our respective cabinets, whence with Capt. CUNNINGHAM's aid I have now assembled a tolerable group of Indo-Sassanian specimens, for inspection at least, though it will be difficult to say much about them.

The distinctive characters of the Sassanian or Parthian coins are, the fire-altar reverse, the peculiar head-dress of the king with flowing fillets,—sometimes the latter attached to the shoulders,—and a legend in the Pehlevi character. There is, however, as Mr. MASSON has pointed out in a memoir published in this Journal*, a marked difference between our coins, (called by TOD " of a *Parthian* dynasty unknown to history,") and the genuine series of *Persia* proper.

Sassanian coins, of the type common to *Persia*, are never found at *Beghram*, according to MASSON, although they are brought for sale in abundance to the bazar of *Cábul*. Two exceptions, however, are noted,—one, an extensive series of small copper coins having a crowned head on the obverse, with a name in the same character as that on fig. 3, greatly resembling the corrupted Greek of the deteriorated *Nanorao* group—the commonest inscription can be exactly represented by the English type **poaopo**. One of this group, supposed by Mr. MASSON to bear the *Bamián* name, was depicted in his note on the antiquities of that place in Vol. V. On the reverse of all these is the fire-altar without supporters, " demonstrating, at least," as Mr. MASSON writes, " that they were adorers of *Mithra;* while from the numbers in which these coins occur at *Beghram*, it may be further inferred that they were current there, and that the sovereigns they commemorate ruled there: although the difficulty then presents itself to determine at what period to introduce their sway, with the mass of Greek and Indo-Scythic coins before us. The coins themselves, however numerous, may be reduced into three series with reference to the nature of the head-dress. The first class bearing a helmet, the second a crown with a ball above it, and the third a

* Note on the *Bámian* antiquities, vol. V. p. 711.

tripartite crown surmounted by an arch of jewels." All these head-dresses, it must be remarked, are met with in the regular Sassanians of Persia, and it may therefore be possible that they were but a provincial coinage of the same dynasty. It was under this impression that I omitted to engrave the figures of these coins, reserving them for a Sassanian series,—although some of them would have served remarkably well as the precursors or prototypes of the copper coins about to be described in Plate XV.

The second exception noted by our countryman at *Cábul* is the Indo-Sassanian group, figs. 3, 5 and 6, of Plate XIV. "The strongly marked Indian features of the busts, and their plentiful occurrence at *Beghram*, especially of their copper money, prove these princes to have ruled here. The heads are remarkable for the bulls' (or buffaloes') skulls around them,—some having four or five of these ornaments, but in general one only surmounts the cap. The legend is in a peculiar and unknown type. The reverse is distinguished by the wheel over the heads of the altar defenders." A great many of the type No. 5 were extracted from the principal tope of *Hiddah* near *Jelalábád*. (See Vol. V. p. 28.)

Mr. MASSON (J. A. S Vol. V. 711) refers them to the *Kiánián* dynasty of Persian historians, to whom he would also attribute the *Bamián* antiquities. He cannot of course here allude to the early branch, which includes CYRUS, CAMBYSES and DARIUS HYSTAPES, for it is verye vident that the coins before us cannot equal, much less surpass, in antiquity the celebrated *daric archers* of Spartan notoriety. He must rather speak of their far descendants, to whom the present independent chiefs of *Seistan* still proudly trace their origin. This race under the name of *Tajik* claims proprietary right to the soil, though encroached upon by the Afgháns on all sides, and at *Bamián* they are found inhabiting the very caves and temples constructed by their infidel progenitors.

As to the probable date of these coins then, little more can be conjectured than that they were contemporaneous with the Sassanian dynasty in *Persia*, viz. between the third and sixth centuries. Their frequent discovery in the *Panjab* topes, accompanied with the Indo-Scythics having Greek legends, should give them a claim to the earlier period; but as far as the fire-worship is concerned, we learn from PRICE's Muhammadan history, that "as late as the reign of MASAU'D, son of Sultán MAHMU'D of *Ghizni* (A. D. 1034), a race, supposed to be the remnant of the ancient Persian stock, submitted to his arms," who had doubtless maintained their national faith to that time unchanged.

The intimate relation between the worshippers of MITHRA and the followers of the *Vedas*, is established by the affinity of the language in which the books of ZOROASTER are recorded, with the Sanskrit. The learned restorer of this ancient text indeed cites some reasons for giving priority to the Zend as a language, and he finds many occasions of interpreting the verbal obscurities of the *Vedas* from analogies in the latter. I cannot refrain in this place from noticing, in allusion to Mr. MASSON's location of the *Kaianians*, a passage in M. BURNOUF's most elaborate *Commentaire sur le Yaçna*, just received from *Paris*, bearing upon this point, and leading to the unexpected conclusion that the Kaianians of Persia and the *Suryavansas* of India, are the same, or have a common origin. The word *kai* prefered to so many names (as Kaiumars, Kaikobad, Kaikaous, Kaikhosru, &c.) having the same signification as the Sanskrit *kavi*, कवि, "the Sun." Against such a hypothesis, however, M. BURNOUF confesses that the *Gujerati* translator of the *Yaçna*, NERIOSINGHA, renders the word كي *kai*, simply by the Sanscrit equivalent for "king." I give the passage at length, as of first importance in a discussion on a mixed Indo-Sassanian coinage.

"Je n'ai pu, jusqu'a present, determiner si les Kaïaniens ou les rois dont le nom est precédé de *ké* (en Zend *kavi*) sont les rois *soleil* ou des rois *descendant du soleil;* en d'autres termes, si le titre de *soleil* a été joint au nom de chacun de ces rois, uniquement pour indiquer la splendure de leur puissance, ou bien si le chef de cette dynastie a passé pour descendre du soleil, et s'il a laissé ce titre à ses successeurs, comme cela a eu lieu dans l' Inde pour les *Suryavança*. Je ne veux pas ajouter une hypothèse étymologique aux traditions fabuleuses dont les Parses ont mélé l'histoire de ces rois; mais il serait interessant de retrouver la forme Zende du nom du premier des Kaianiens, de *Kobád* قباد, nom dans lequel on decouvrirait peut-être le mot *kavi* (nom. *kavá* et *kava*), soleil. Si *Kobád* pouvait signifier "le soleil" ou "fils du soleil," la question que nous posions tout à l'heure serait résolue, et les autres Kaianiens n'auraient reçu le titre de *kavi* (*ké*) que parce que la tradition les regardait comme issus d'un fils du soleil. Je remarquerai encore, sans attacher tontefois beaucoup d' importance à ce rapprochement, qu'on trouve dans l'histoire heroique de l'Inde plusieurs rois du nom de *kavi*, et notamment un fils de PRIYAVRATA, roi d' *Antarvédi*. HAMILTON dans l' index de ses *Genealogies of the Hindus* cité quatre personnages de ce nom, sans parler de deux autres rois, dans le nom desquels figure ce même titre de *kavi**. Enfin M. ROSEN a cité un

* *Gen. Hindus*, page 77, on trouve dans le Rik et dans le Yadjourvéda, un roi nommé *Cavasha*, (COLEBROOKE, As. Res. VIII. 399,) et ce qui peut faire penser

vers extrait d'un hymne du Rigvéda, dans lequel les mots *viçâm kavim*, voisins du composé *viçpatim*, doivent peut-être se traduire plutôt par *hominum regem* que par *agricolarum vatem.*"—[*Commentaire sur le Yaçna, chapitre I. p.* 455.]

I now proceed to particularize the coins inserted in my plate.

Indo-Sassanian Coins, Plate XIV.

Fig. 1, a silver coin in my cabinet of an unique type:—*Obverse* the prince on horse-back, head disproportionate in dimensions. On the horse's neck is a flower vase*, which is probably supported by the man's left arm; on the margin are some indistinct Pehlevi characters and on the field a monogram, resembling the Nágarí letter ज. The device on the *reverse* is nearly obliterated.

Fig. 2, a copper coin, also unique: it escaped my detection among a number of old *Bokhara* Musalmán coins, or it should have appeared along with the *bull* and *horseman* or Rájpút series of December, 1835. It seems to link this curious outline group with the full-faced Sassanians of VASUDEVA, &c.; for on the border of the obverse are Pehlevi letters. The features of the supposed face are barely admissible as such even on the lowest estimate of native art. The horse on the *reverse* is more palpable, but it seems more like a *toghreh* or flourish of Persian letters, than ever. It is also reversed in position, and has no Nágarí legend.

The coins of this genus, although we have found them connected with *Delhi* sovereigns and *Malwa* rájas at one end of the series, evidently reach at the other to the bráhmanical rulers of the *Panjáb*, and probably *Cábul*. They are procured much more abundantly at the latter place (and on the site of *Taxila* according to M. COURT) than in any part of India. Some of them exhibit on their reverse the style of Arabic now known to belong to the *Ghaznavi* Sultáns, while others agree rather with the *Ghori* type, and contain known names of that dynasty.

Fig. 3, a silver coin in my cabinet, K. A. Several of the same nature are depicted by MASSON as noticed above. The execution is very bold and the preservation equally good. A double blow has, however, confused the impression on the reverse.

The head-dress or helmet is surmounted by the head of a buffalo, in imitation perhaps of MENANDER's elephant trophy. The two wings common on the Sassanian cap are still preserved. The

a quelque monarque *Bactrien*, c'est que ce *Kavacha* est père de *Tura*, dont le nom rappelle le Touran. Mais je ne crois pas, pour cela, que *Kavacha* puisse être identifié avec le mot Zend et Sanscrit *kavi*.

* Perhaps the *Kámacumbha* or vase of abundance, of Tod. *Ann. Raj. I.* 603.

prince wears a profusion of pearls and handsome earrings. In front of his face is a legend in an unknown character, which can, however, be almost exactly represented by Nágarí numerals, thus: ३ ।४ ० ३ ∞ २. None of the pure Pehlevi is to be seen on either face, but on the shoulder in the corner is something like a Nágarí म, which is probably an *m*, not a *bh*. The fire-altar of the reverse is remarkable from the two wheels or *chakras* over the officiating priests. We shall see more of these again as we descend.

Fig. 4. is a silver coin in Dr. SWINEY's possession: it is of inferior workmanship, the features *beginning* to be cut in outline. A diminutive figure (female) in front of the face holds a flower or cornucopia:—just above can be discerned two small Sanskrit letters प्रति *prati* or *pratá* ... which suffice to ally the coin with our present group.

The two succeeding figures are from MASSON's drawings, some of which have already appeared in lithography. Fig. 5 represents rather a numerous class of the same type as fig. 3. The letter of the legend is sometimes omitted, and the ∞ becomes a ꝺ; but without examining the coins themselves, it would be unsafe to argue on such differences. No. 4 represents a variation of the monogram, it may be an old form of म

Fig. 6, is an interesting coin, similar to my *Vasudeva*, and the *Manikyala* coins in some respects, but hardly so far advanced towards Hinduism, inasmuch as the fire-altar is retained, and the full marginal legend on both sides is in the unknown character, while the Nágarí occupies only a secondary place on the field. This name, too, is, as it stands in MASSON's drawing, wholly uncertain, with exception of the initial *Sri Va*... It may be श्रीवज्रवत्र . ह्र.

We now arrive at a class of coins of considerable interest as well to the history of India, as to the science of numismatics; for the gradual manner in which the nature of their device has been developed is as much a matter of curiosity, as the unexpected conclusion to which they lead respecting the immediate prevalence of the same Sassanian (or ignicolist) rule in Upper India, while the foregoing coins only prove the mixture of Hinduism with the religion of Bactria.

Colonel TOD has repeated an observation of Dr. CLARKE the traveller, that "by a proper attention to the vestiges of ancient superstition, we are sometimes enabled to refer a whole people to their original ancestors, with as much, if not more certainty, than by observations made upon their language, because the superstition is engrafted upon the stock, but the language is liable to change." In some respects the converse of this proposition would be better

suited to the circumstances of India, where we have long had irrefragable proof of the alternate predominance of the Buddhist and Bráhmanical faith among people using the same language; and now we are obtaining equally strong testimony of the engrafting of the fire-worship upon the same local stock. The extensive spread of this worship in the north-west is supported by the traditionary origin of the *Agnicula* or fire-worshipping races, whence were derived some of the principal families of the Rájpúts.—Indeed, some have imagined the whole of the *Surya-vansís*, or sun-descended, to have been of Mithraic origin, and the *Indu-vansís* to have been essentially Buddhists*. Numismatology will gradually throw light upon all these speculations, but at present all we can attempt to elucidate is the important fact of another large series of Hindu coins, (namely, that bearing the legend श्री मदादिवराह *Srímad ádi varáha,*) having directly emanated from a Sassanian source. I say another, because the *Saurashtra* coins, and the *Chauka-dúkas* their descendants, have been already proved to possess the Sassanian fire-altar for their reverse. The sects of the *Surya-panthis,* and the *Mors* who are known as fire-worshippers at *Benares,* have not perhaps received the attention they merit from the antiquarian;—but even now the solar worship has a predominance in the Hindu pantheon of most of the *Márwár* principalities. Colonel TOD thus describes the observances sacred to this luminary at *Udayapur* (the city of the rising sun):—"The sun has here universal precedence; his portal (*Surya-pol*) is the chief entrance to the city; his name gives dignity to the chief apartment or hall (*Surya-mahal*) of the palace; and from the balcony of the sun (*Surya-gokra*) the descendant of RÁMA shews himself in the dark monsoon as the sun's representative. A huge painted sun of gypsum in high relief with gilded rays, adorns the hall of audience, and in front of it is the throne. As already mentioned, the sacred standard bears his image, as does that Scythic part of the regalia called the *changi*, a disc of black felt or ostrich feathers, with a plate of gold to represent the sun in its centre, borne upon a pole. The royal parasol is termed *kirnia*, in allusion to its shape like a ray (*carna*†) of the orb." Many other quotations from the same author might be adduced in proof of the strong Mithraic tinge of Hinduism in modern *Rájputána*: and, in fact, the Muhammadan historians tell us that the fire-worship in *Gujerat* was only finally uprooted in the time of ALA-U'DIN's incursions into the *Dekhan.*

* Annals of Rájasthán, I. 63. See also preceding remarks.

† Can this have any connection with the title *korano* of our coins?

Fifteen years ago Colonel CAULFIELD sent me two coins dug up at *Kota*, where he was then Resident, which were engraved in Pl. III. of the Asiatic Researches, XVII. as fig. 65. It seemed then perfectly hopeless to attempt a guess at their nature—but now we can pronounce precisely the meaning of every rude mark they contain—the fire-altar and its attendant priests, and the bust of the prince on the obverse. Colonel STACY's collection has furnished the chief links of this investigation, but it is to Captain CUNNINGHAM's examination of it and careful analysis of the numerous small silver *Varáhas* of our several cabinets that we are indebted for the knowledge of the balusters, parallelograms and dots being all resolvable into the same fire-altar and its attendants. Indeed so long ago as January 1836, he wrote me from Benares his conjectures that this series was descended from the Parthian coins.

From the selection he had assorted to trace out and illustrate this curious fact, I have been obliged to restrict myself to such as my plate would contain; giving the preference to those that exhibit well defined letters on some part of the field.

Fig. 7, silver. Col. STACY. *Obverse*, the Sassanian head in its degenerated state, or cut in outline: the hair is represented by a mere ball, the ear by a curve, &c.; the two stiffened muslin lappets rise from each shoulder as in figs. 3 and 5, and would be utterly unintelligible but for the light thus afforded. Above the head is the Sanskrit श्री (resembling the *Gaur* or *Bengálí* form) and in front of the mouth the letter भ which is most probably a भ or *bh*. On the *reverse* of this coin the fire-altar is very discernible, and it is instructive to study the configuration of the two supporters, the flame, and the altar itself, so as to be able to follow out the subsequent barbarization they were doomed to undergo. Thus in fig. 8 (Col. STACY) they lose a little more:—in 9 (ditto) the two breast dots and the curve of the arm separating them from the body are barely traceable. In Col. STACY's copper coins 11 and 12, the engraver has collocated the various dots and lines without any regard to their intent or symmetry. Then in 13, 14, which are precisely similar to the class engraved in figs. 17, 19, 20, Pl. L. vol. IV., the fire altar is transformed into a kind of spear-head, or the central shaft taken out and supplanted by the old Nágarí letter म *m*; but the side figures, where the die permits of it, can still be readily made out. These general remarks will save the necessity of describing the reverse of each coin in detail. There are equally grotesque varieties in the contour of the face on the obverse, which none but an experienced eye could trace:

for instance, in figs. 11, 13, and 14, where the eye, nose, lips and chin resolve themselves into elementary dots, very like those on the Saurashtra coins.

Fig. 9 has the letters श्रीयध or श्रीलध *Srí Ladha* . .

Fig. 10, a small copper coin belonging to Dr. SWINEY, is in a far superior style, with the exception perhaps of an unaccountable substitution of the *chakra* for the head of the attendant at the altar! Can thus it denote the Sun himself? There are letters in front of the face श्रीदट .... *Srí Dat* . . . or some such name.

In figs. 11 and 12 (which latter gives the lower portion of the same die), there are more letters than usual:—enclosed in a circle on the cap or crown the letter ष *s*: then in front of the nose the usual श्री, and below it the ह or *h* of the same alphabet.

In the lower series (13, 14,) the shoulders and hand are generally replaced by letters. On some the context seems to make श्रीविग्र *Srí Vigra (ha)*; on others श्री यो .. *Srí Yo*, and श्रीपि .. *Srí Pi* . . . None are complete enough to give us a cognate name.

Having conducted this line of Indo-Sassanians down to its amalgamation in the *Varáha* series of my former plate, we may recede, once more, back to the period when the Indian artists could execute a less imperfect copy of the Grecian or Sassanian portrait-die.

Figs. 15, 16 of this plate, and 6 of the ensuing one, are types of a distinct group of copper coins, plentiful in the SWINEY and STACY cabinets. The appendage to the shoulder decides the Sassanian origin, and the wheel on the reverse seems to be borrowed from the emblem above the fire-altar. I incline to think it the solar effigy, rather than the symbol of a *Chakravartti*, or ruler of universal dominion. It is probable that this common emblem is still preserved in the sun of the *Ujjain* and *Indore* coins of the present day. There is the appearance of a letter in front of the face, but ill defined. On the opposite side, however, the two large letters under the wheel are most distinctly तोर, *tora*, the meaning of which remains a mystery. They are not in the same alphabet as that of the preceding coins, but of the more ancient *lath* character which accords so far with the comparative superiority of the engraving.

Plate XV.

Figs. 1, 2, 3, from Colonel STACY's drawings, and 4, 5, from Dr. SWINEY's coins, are closely allied to the series just described: the Indian bull only being brought on the reverse, generally with the retention of the *chakra* under his feet or on his haunches. The name in front of the rája's face in figs. 3 and 4 contains several recogniza-

ble letters; on fig. 5 they are still more distinct, श्री प्रहेर कु it may possibly be intended for श्री महाराजा *Srí Mahárájá*, leaving us still in the dark for a name.

On the reverse of fig. 4, under the bull, are the letters विजय वग *vijaya vag* . . a form that will be found more developed in another branch of this curious series below.

In the next variety, figs. 7 and 8, of which Dr. SWINEY boasts the largest supply, the Sassanian head is no longer retained, but the *chakra* remains coupled with a kind of cross which may be read as the syllable *ku* of the old alphabet. The bull of the reverse is now accompanied by an attendant exactly in the fashion of the inferior *Kadphises* or OKPO group of the *Mithraic* coins.

In the succeeding variety, figs. 9, and 10 (SWINEY), the *chakra* gives place to the trident (of SHIVA?) and the bull takes an attitude of repose à la *Nandi*. The letters वोदोसगु *Vidí sagu* or *Vedèsagu* are bounded by the marginal dots, and must therefore be complete, however unintelligible. Were there room for a final ग्र we might conjecturally read विदेशगुप्त *Vidèsagupta*, "cherished by foreigners;" which would tally with the notion of a Parthian interloper.

In fig. 11 (which I also engraved in the Kadphises plate of vol. III.) the trident has the letters त्र *tri*, as if for *trisula*.

In figs. 12 and 13 the symbol is more like the original fire-altar:—to the former are adjoined the letters रुद्र, or perhaps रुद्र *Rudra*, a name of SHIVA.

In figs. 14, 15, (STACY,) and 16, (SWINEY,) the standing figure has quitted the bull to take the chief post on the obverse—the marginal inscription of 14 commences with राज and the last letter is म.

In figs. 17, 18, (SWINEY,) the bull is again replaced by the *chakra*, with two Sanskrit letters षत or सुत—sense unknown.

And now we advance or perhaps it would be more correct to say retrograde to a much more satisfactory group, forming as it were a link between these Indo-Sassanians, and what have been called the Buddhist coins.

The specimens of this series, christened the "cock and bull" by Colonel STACY, and first made known by him, were deficient in preservation; but Mr. TREGEAR of Juanpúr has since been fortunate enough to procure a considerable quantity of various sizes with the epigraph beautifully distinct. They were found in company with copper coins of the GUPTA series, which are in the same style both as to the letters and their horizontal situation in what is called the *exergue* of western numismatics. As pointed out by Mr. TREGEAR, there are three varia-

tions in the reading. On 20 and the coin below it; सत्यमितस *Satya mitasa.* On the fine coins figs. 21, 22; सयमितस *Saya mitasa.* And on Nos. 19, 23, 24 and 25; विजयमितस *Vijaya mitasa.* The variable portion of these, *satya, saya,* and *vijaya,* are evidently epithets, the perfect, the true, the victorious,—but the name to which they are applied, *mitasa,* whether of a person or thing, is unfortunately only open to conjecture. From the analogy of the *okro* bull, and the evident descent that has been traced in these plates to a *Mithraic* origin, I feel strongly inclined to read the word मित्रस्य " *mitrasya,* of the true, the victorious sun," the *Mithras.*—*Mitra* has also the signification " ally," if it be preferred to confine the title to a mundane ruler.

If the possessive termination be not made out, the terminal *s* may possibly be used in place of the *visarga.*

In figure 22, the trilingual symbol brings us directly to the extensive and oldest of our Hindu series. Of these we have, thanks to Mr. TAPGEAR and Col. STACY, enough to fill another plate or two, but they must be kept distinct; while to close the present plate more consistently, I have inserted in figs. 26, 27, two small silver coins found by Capt. BURNES at old *Mandiví* or *Raipúr* in *Cutch,* having Sassanian heads, and reverses respectively corresponding to figs. 7 and 12.

The little copper piece 28, from the same place, has the Nágarí letters श्री भीम *Srí Bhima;* the last letter uncertain.

To balance these I have selected three copper coins of Dr. SWINEY's store, on account of their having the *chakra* or the bull for obverse. On No. 31 we can read the titles श्री .... महाराज *Srí . . . Mahárája;* the name as usual provokingly obscure! Dr. S. reads it *ganapati.*

Plate XX. Ceylon Coins.

After wading through the doubtful maze of obscurity exemplified by the foregoing coins, where we have almost in vain sought a feeble landmark to guide us even as to the race or the country whence they sprung, it is quite a relief to fall upon a series of coins possessed of their true and legitimate value as unequivocal evidence of the truth of history.

The peculiar coins of ancient *Ceylon* have been long known to collectors: they have been frequently described and depicted in books, and the characters they bear identified as Deva-Nágarí, but little more. MARSDEN and WILSON, as will be seen below, were quite at fault in regard to them, and so might we all have remained had not the Hon'ble Mr. G. TURNOUR published his Epitome of the *Ceylon* History from the Buddhist Chronicles. Upon my publishing in vol. IV. a sketch of the coin which ranks first in the present plate, and suggest-

Ceylon Coins.



ing the reading *Srí Mayátraya Malla*, I remarked that, although princes of this family name were common in *Nepal*, I could find none in the *Ceylon* list to correspond. This observation elicited the following note from Mr. TURNOUR, which in justice to his sagacious and correct prediction ought to have been published long ago.

" *Note on Hindu Coin, fig.* 22, of Pl. L. vol. IV.—In your valuable paper in the Dec. Journal, on Hindu Coins, you say that the name of *Malla* does not appear in my Catalogue. He is doubtless identical with *Sahassa Mallowa* in my epitome published in the Almanac of 1833. In the translation No. 6 of the inscription published in 1834, you will also find him called *Sahasa Malla*. That inscription contains a date, which led to an important correction in my chronological table explained at page 176. He commenced his reign in A. D. 1200. His being a member of the *Kalinga* royal family—his boastful visits to India:—and *Dambodinia* (which you have called *Dipaldinna*) becoming the capital in about 30 years after his reign, where the former similar coins were found;—all tend to shew that the coin in question may be safely given to him. You will observe also by the inscription that his title was *Sirri Sangaba Kalinga Wijaya bahu*, surnamed *Sahasa Malla*.

Kandy, 17th March, 1836. GEORGE TURNOUR."

There was no other *Malla* in the list, and therefore the assignment was probable, but I laid little stress on it from the total variance of the rest of the name. In August, 1836, Captain ORD, of *Candy*, sent me impressions of the coins he had met with, and pointed out that the first letter of the third line was not formed like त्र but open like द्र. To pursue the train of small causes leading to an important result, when lithographing the *Delhi* inscription of the 10th century in vol. V. page 726, the very first letter स struck me as resembling in the squareness of its form, ⊏ the *Ceylonese* letter I had before mistaken for य. The enigma was thus in a moment solved, and every subsequent reading, (for coins of this prince are exceedingly common compared with others,) has confirmed the reading श्रीमत्साहसमल्ल *Srí mat Sáhasa Malla*, in accordance with Mr. TURNOUR'S conjecture. In some few specimens the *t* of *mat* is either omitted through ignorance, or worn away; but in general it is quite distinct. MARSDEN'S reading was मया द्या मल्ल *Maya daya malla*.

The ice once broken, it became comparatively easy to find owners for all the other specimens either published in former notices, or existing unpublished in cabinets on the island.

Capt. ORD, not content with sending me drawings of those in his

possession, kindly transmitted the coins themselves, allowing me to retain the duplicates. Mr. TURNOUR also generously presented me some coins lately dug up in the ruins of the old city of *Montollee* by Mr. GIFFORD, Assistant Surveyor General. So that, including the gold coin sent me six years ago by Sir W. HORTON himself, and the coins in the Society's Cabinets from *Dipaldinna* (which are of the same class precisely), I am now in a condition to issue a full plate of this type, preserving a degree of chronological order in their arrangement.

The device on all these coins is the same; a rude standing figure or rája on the obverse, holding a flower in the left hand, and an instrument of warfare in the right. The skirts of the dress are rudely depicted on either side of the body, and the fold of the *dhotí* falls between his legs, which being taken for a tail, has led some to call him HANUMÁN, but I think without reason: there are 5 dots and a flower to the right. On the reverse the same figure is more rudely depicted in a sitting attitude. The mode of expressing the face is altogether unique in the history of perverted art.

Fig. 1, the gold coin sent me by Sir W. HORTON, has the inscription श्री लंकेश्वर *Srí Lankèswara* on the side of the seated rája.

This name I presume to be the minister *Lokaiswara* of Mr. TURNOUR's table, who usurped the throne during the Sholean subjection in the eleventh century, (A. D. 1060;) but he is not included among the regular sovereigns, and the coin may therefore belong to another usurper of the same name who drove out the queen LILÁVATI' in A. D. 1215, and reigned for a year. The Ceylon ministers seem partial to the name: one is called LANKANÁTH.

Fig. 2, a copper coin, copied from MARSDEN, but found also in Mr. LIZAR's drawings, though I have not seen the actual coin. The name is श्री विजाय बाहु *Srí Vijaya báhu.* (MARSDEN makes the last word गद् *gada*, erroneously.)

There are several princes in the list of this name: the first and most celebrated was proclaimed in his infancy in the interregnum above alluded to, A. D. 1071, and reigned for fifty years. He expelled the Sholians from the island and re-established the Buddhist supremacy.

Fig. 3, a copper coin, given to me by Capt. ORD. One is engraved in the Researches, and is doubtingly interpreted *Srí Ráma náth* by Mr. WILSON. From many examples, however, it is clearly श्री पराक्रमबाहु *Srí Parákrama bahu.* The first of this name was crowned at *Pollonnarowe*, A. D. 1153, and sustained for 33 years the most martial enterprizing and glorious reign in *Singhalese* history.

Fig. 4. Among the coins dug up at *Montollee* were several small ones of the same prince. *Srí Parákrama báhu* fills the field of the reverse.

Fig. 5. This coin, one of the new acquisitions, has the name श्री राज लीलावती *Srí Rája Lílávatí*, another celebrated person in Singhalese history. She was the widow of the PARÁKRAMA just named; married KIRTI, the minister of one of his successors, not of the royal line, who was put aside, and the kingdom governed in her name from A. D. 1202 until she was deposed by SÁHASA MALLA. She was twice afterwards restored.

Fig. 6, of *Srí mat Sáhasa Malla*, has already been described. The date assigned to this prince in the table is 1205 A. D. or 1748 A. B.; a date confirmed by a rock inscription at *Pollonarowe*, translated and published in the *Ceylon* Almanac for 1834, page 190. He again was deposed by his minister NIKANGA, and was succeeded in 1213 by

Fig. 7, श्री धर्म्माशोकदेव *Srí Dharma Asoka deva*, a prince of a very imposing Buddhistic name, who was placed on the throne at the age of three months, but of whom nothing further is said. The *portrait* would lead us to suppose him of mature age.

Fig. 8. We here pass over a period of turbulence and continual invasions from *Chola*, *Pandia* and *Kalinga*, and arrive at a coin of श्रीभवानेक बाहु *Srí Bhawáneka báhu*, who seized the throne on his brother's assassination by a minister in A. D. 1303. In his reign the Pandian general, ARIYA CHAKRAVARTTI' took *Yapahu*, the capital, and carried off the Dalada relic so much prized by the Buddhists of *Ceylon*.

Fig. 9. We now come to a name of less certainty than the foregoing, and possibly not belonging to the island, for it is one of a large quantity of coins found by Col. MACKENZIE at *Dipaldinna* or *Amaravatí*, on the continent of India,—a name so similar to the *Dambadinia*, where many of the *Ceylon* coins were discovered, that, seeing the coins were identical, I supposed at first the places must be so likewise. The uppermost letter is cut off. The next two below are decidedly ज, and under the arm we find श्री and रा. The most legitimate context would be श्री (म) ज राजा *Srí Gaja Rájá*, (A. D. 1127,) but the म is hardly allowable.

There are many small coins (10 and 11) from the same place, reading like it the same indefinite title राज *rája*, to which no better place can be assigned.

Fig. 12. Here again is a common variety of the *Dipaldinna* series, which was thought utterly hopeless, until Mr. TURNOUR favored me with drawings of Mr. LIZAR's collection. Two of these (figs. 13 and 14) exhibit a new type of reverse, the Indian bull *Nandi*, which may

possibly betoken a temporary change in the national religion. The legend beneath I immediately recognized as identical with the flourish on figure 12, turning the latter sideways to read it. What it may be, is a more difficult question. The first letter bears a striking analogy to the vowel e of the Southern alphabets—but if so, by what alphabet is the remainder to be interpreted? for it may be equivocally read *bètya, benya, chètya,* and perhaps *Chanda* or *Nanda*. The last alone is the name of a great conqueror in the Cholian and other Southern annals, but it would be wrong to build upon so vague an assumption. It is, at any rate, probable that the bull device is a subsequent introduction, because we find it continued into the *Hala Canara* coins below.

Fig. 15, of the Society's cabinet, a thick well preserved coin, has a device one step less recognizable as a human figure on the obverse, but the bull very neatly executed on the reverse, and in front of him the Nágarí letters वी *ví,* as if of *Vira báhu,* 1398?

Figs. 20, 21. In these the upright figure has quite disappeared, or is dwindled to a mere sceptre: leaving space around for the insertion of a legend in the old Canarese character, of which an alphabet was given in my last number. It is, unluckily, not complete, but the *Canara* letters .. *da cha*.. *ráya* are very distinct.

But before touching such modern specimens, I should perhaps have noticed a few other genuine old coins; some, as fig. 16, having a bull and two fish; others, as fig. 24, having a *singha* and four dots. They were all dug up at *Montollee* with the rest.

These symbolical coins without names agree in every respect with the numerous class of Buddhist coins found in India, and fellows to them may be pointed out among the *Amarávatí* coins, as figs. 17, 19, of the bull kind, the reverse plain or uncertain; one much resembling a ship; and fig. 25, a prettily executed brass coin of a horse.

One fragment, fig. 18, of the sitting bull, from *Montollee,* has the letters श्रीवी .. कच in the Nágarí character on the reverse.

The two very small coins, 22, 23, retain some of the *Ceylon* symbols—the anchor-shaped weapon (of HANUMÁN?) in particular; but to show how cautious we must be in receiving as equally old, all the coins found buried together in the same locality, I have given as the finale to this plate, one of the *Montollee* specimens, fig. 26, which, however mystified by the ignorance of the die-engraver, I cannot interpret otherwise than as an old Dutch paisa, stamped on both sides $\frac{1}{8}$ St. or one-eighth of a stiver! A *Seringapatam* paisa with XX. CASH (written invertedly, HSACXX.) has often puzzled amateur collectors in the same manner.

IV.—*On the Revolution of the Seasons, (continued from Vol. IV. p. 257.) By the Rev.* R. Everest.

A correspondence between certain atmospheric phenomena, and certain positions of the moon, similar to what we have attempted to trace in the preceding papers, has been observed before in various ways, by others, and, in a degree, in all ages. But the objection may be fairly urged to such attempts, that, if we examine the supposed correspondence closer, no regular succession of phenomena can be made out. No state of the atmosphere can be expected to return of a certainty upon the recurrence of the assumed cause: nor, in such cases, can any probable circumstance be assigned, which might be supposed to have counteracted its operation. We may remark, however, upon this, that no two cases are precisely similar; one of the principal conditions of the problem, viz. the heating surface of the earth, never remaining the same, owing to the changes continually brought about in it, both by natural agents, and by the hand of man. Nor can the effect of this last be deemed unimportant, if we consider the many common processes, such as the felling of forests, ploughing, reaping, and irrigating, which are going on, at all times, more or less, over large tracts of country? Let us suppose it possible that a local irregularity of some kind might interrupt the operation of the cause—say (for instance) to such a degree, that the shower, which should have fallen with us, fell 5, or 50, or 500 miles distant from us; then, if, instead of the results of a single rain-guage or a single barometer, we could measure the amount of effect produced over an extensive surface of the earth, we might the more reasonably hope to obtain some approximation towards a regular succession of phenomena, in proportion as we were thus enabled to obviate the effects of disturbing causes. It occurred from this, that, in a country where the harvest depended almost entirely upon the quantity of rain that fell, the prices of grain in past years (the averages being taken as extensively as possible) might indicate, though imperfectly, a regular succession of the seasons, as far as drought and moisture were concerned; provided, of course, that such a regular succession had actually taken place.

This idea may appear so strange to many, especially to those who are not acquainted with the interior of India, that it may be as well to give it a little further consideration.

It must be familiar to every one that parts of the ancient world, such as Egypt and Judea, were subject at different times to famines

consequent upon drought. These are not uncommon at the present day in low latitudes. In *Australia*, for instance, 'frightful droughts occur in cycles of 9 or 10 years,'—(see *Westminster Review*, No. 45, July 1835, p. 223, and again p. 224 ;) and that such always have occurred in India, the history of the country abundantly shews. Perhaps the most remarkable one upon record is that which took place in Bengal in the year 1770. (See MILL's History for the particulars of this.) Now we have in the 1st vol. of the *Gleanings*, a list of the prices of different kinds of grain at *Chinsurah* in *Bengal*, from which we find that, in that year, rice was so dear that only 3 seers of it were sold for 1 rupee. If we examine this list further, we shall see that from the year 1733, the years of scarcity, or minimum quantity, and the intervals between them, were as follow :—

Years,....	1733....	1752...	1770....	1788....	1807.
Intervals,....	19.....	18.....	18.....	19.	

If we add to the upper line, 1826, we have altogether 5 intervals of between 18 and 19 years for the recurrence of scarcities in Bengal. From 1733 to 1826 is 93 years, which divided by 5 gives 18$\frac{3}{5}$ years. There are some, but faint, traces of scarcities intermediate to these. We must remember that 18$\frac{3}{5}$ years is very nearly the duration of the Lunar Cycle.

Having proceeded thus far, we next ascertained by inquiry the dates of the principal scarcities that had occurred in the upper provinces within the memory of man. They are—

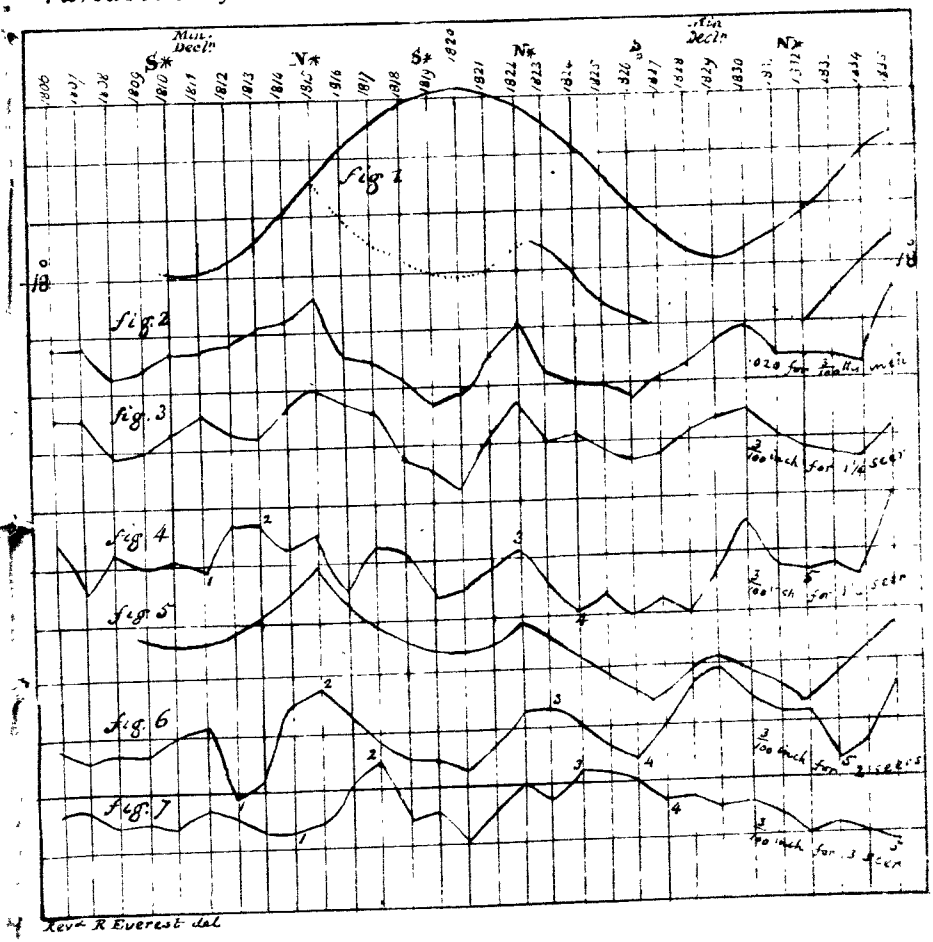
1782-3—1792-3—1802-3—1812-13—1819-20—1826—1832-3.

It will be observed that the recurrences here are nearly twice as frequent as in the former case.

The year 1829 being the year of minimum declination, the years corresponding to it in the previous cycles will be 1811 and 1792; and 1820 being the year of maximum declination, the years corresponding to it in the previous cyles will be 1802 and 1783. Thus we have a scarcity in each year of maxmium declination, besides another on, or close upon, the year of minimum declination, and in the case of 1829 a double one, viz. 1826 and 1832. We shall revert to this presently.

On obtaining one or two lists of the prices of corn, it was found, as might be expected, that these were the years when the least quantity was sold for a given sum ; and that, intervening, about midway, were years of extraordinary plenty, when the greatest abundance every where prevailed. So that it appeared as if the prices would form a curve of which the maxima and minima recurred at fixed intervals of

Variations of the Moon's Declination, and of the price of Grain.



Revd R Everest del

Head of a Snake killed at Cuttack. Lt Kittoe

COLUBER MYGTERIZANS?





Abdominal plates 185

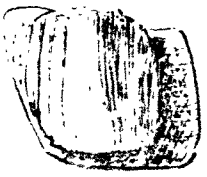


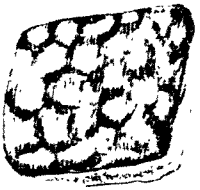
Caudal 280



M Kittoe del.

2nd Fossil Bone from Fort Boring, 36½ ft.





nearly 9 years. Still, on considering the many causes, both natural as well as produced by human means, which must operate in determining the price of corn, we could not believe it probable that the indication of one, or even of a few lists, were to be depended upon. To obviate, therefore, local irregularities of every kind, it was thought necessary to procure lists of prices from as many places as possible,—lists specifying in detail the prices of four of the principal varieties of corn grown in the neighbourhood (two of the summer, and two of the winter crops), and, as in the *Chinsurah* list in the *Gleanings*, the number of seers sold for one rupee was to be mentioned in each case. Lists of this sort were obtained from *twenty-two* of the principal towns within 200 miles on each side of *Delhi*, *Lodiana*, and *Hansi*; *Bareilly* and *Agra* being the extremes. They all agree very nearly in the principal maxima and minima, and, as they were furnished by different persons who had no communication with each other, their joint result cannot well be ascribed to the errors of copyists, or, indeed, to incorrectness of any kind. The average of all these was taken (four kinds of corn at each place) for each year; the mean price for the season being thus settled by 88 items.

The series thus obtained we shall call our north-west line. Three lists (four kinds of corn in each) were obtained from *Bengal*, and the average of them taken for the *Bengal* line. Two lists (also four kinds of corn) were obtained from the neighbourhood of *Benares*, and the average of them taken for the *Benares* line. The average, then, of the three lines thus formed was taken for a general line.

To connect the variations in this general line with the declination of the moon, we must have recourse to the supposition that the variation is for a series of years direct with the declination, and then for a series, inverse with it,—a supposition for which no reason can be assigned, but which will appear the less improbable, if we recollect a circumstance stated in a previous paper, viz. that the variations of the barometer, either in excess or defect of the mean, increased with the increase of declination.

This connection, or assumed connection, may be most readily shewn thus. Let us first trace upon paper the progress of the moon in declination in different years in this manner. Draw a number of vertical lines at equal intervals (Plate XXII.) to represent the years in succession from 1810 to 1835 (both inclusive). Take out of the Nautical Almanack the highest declination to be found in the month of July in each year, and mark that height upon the vertical line corresponding to the year at any fixed rate, (as 0.1 inch) for each degree that it is above

18°. When you have marked all the heights, join them, and you have the upper, or continuous line, fig. 1. The lower or dotted line in fig. 1, where it separates from the upper,—is formed from it, by substituting for the increments, equal decrements, so as to be exactly the inverse of it. Where this lower line again changes to a continuous one, it runs parallel (or varies directly) with the upper one, and again, where it changes to a dotted one, becomes the inverse of it. It is this lower line, partly direct, partly inverse with the upper, that appears to be the type of the variation of the seasons. As a proof of this, we subjoin below (fig. 2) the general average line of variation in the prices of corn during the same period. This line was thus formed. The three principal lines, the north-west, the *Benares*, and the *Bengal*, were first formed from the average of the different lists. When the maximum and minimum number in each line within the last 85 years (since 1750), were noted, and the difference between them reckoned as the whole amount of variation. This amount was divided into 1000 parts, and, for the actual number in each line, the proportionate parts of the variation were substituted. The average was then taken of the 3 lines, and this is the line expressed in fig. 2, which is there traced upon the paper at the rate of ·020 parts of variation for $\frac{1}{16}$th of an inch. The lowest line (fig. 3) is the general average, simply taken, of the principal lines, without any previous division of the variation into centesimal parts. A fourth, or southern line, was in this case included in the average, having been formed from prices at *Jubulpoor* (two kinds of corn), at *Bhopaul* (three kinds of corn), at *Indore* (two kinds of corn). But as the country in that direction was during part of the time the seat of war, and has been generally subject to unsettled government, and moreover the returns are not numerous, no great dependance can be placed upon it. In fact, the indications given by the north-west series are much more to be relied on than those of the others, owing to the more extensive induction.

In the last paper on this subject we noticed that there were certain years in which, about the solstices, the perigee of the moon fell on the same day with her maximum declination, either north or south, and that these were commonly extreme years, both of drought and moisture. These years are marked thus in the Chart N.* and S.* according as the declination is north or south, and it would appear on referring to the figures that these are usually the extreme years both of plenty and scarcity. They appear also to be the periods at which the variation changes from direct to inverse.

The maxima and minima by the *Calcutta* rain-guage since 1820, are

1823	1826	1832	1835.
+	—	—	+

These results do not differ from those afforded by the average of corn prices (figs. 2 and 3), more than the prices obtained from any one place differ from the general average. The results of registers kept in other places do not show so good an agreement; but the three principal ones we can refer to are those of *Macao*, *Madras* and *Bombay*; all places on the sea-coast, where rain seems to fall more irregularly than elsewhere. If it be asked, why, with the anomalies that still exist in the lines (figs. 2, and 3), we have presumed the upper line (fig. 1) to be the type of them, we answer that that line was formed after seeing the three or four lists of corn prices that first came to hand, and that every successive list received helped to approximate them more closely; the inference, therefore, is only fair, that still further lists obtained would diminish the irregularities at present existing, though we could not hope to obtain an exact parallelism, unless we were previously enabled to apply corrections for the many other causes that must affect the prices of corn. If we refer to the line (fig. 1) which we have assumed as the type of the variation, we shall perceive that on each side of the year 1829 a small inverse, or dotted piece exists: on looking back over the lists of prices, some of which extend as far back as 1700, I do not think that this small inverse piece is interpolated or intercalated, if I may so call it, oftener than every third cycle. With this exception, the variation appears to be direct for about 9 years, and then inverse for the same period. Thus from 1815 backwards, the variations are 9 years directly to 1806—9 years inversely to 1797—9 years directly to 1788, and 9 years inversely to 1779. Then from 1779 a variation is inserted similar to that between 1836 and 1823, up to 1767 or 1766; and again backward from that, periodical curves of 9 years in duration appear to occur as before. On this I shall crave permission to speak more hereafter, when, by the obtaining further lists of prices from different places, I may be enabled to correct those which I at present possess. For this reason I have refrained from carrying the present investigation further back than 1806. I beg at the same time to return my grateful thanks to those who have already assisted me with lists of prices. On looking over the lists it appeared that in those from particular quarters the maxima and minima occurred a year or two too soon, in other places a year or two too late for the supposition. To elucidate this, the lines, figs. 4, 5, 6, and 7, were drawn. Of these, fig. 5 is the type,

being the same as the lower line, fig. 1. Fig. 4, or the *Bengal* line, appears to have its maxima and minima, generally speaking, somewhat earlier than the fictitious line :—fig. 6, or the north-west line, has them somewhat too late, and fig. 7, or the southern line, still later. A fact somewhat analogous to this is observed in Europe where the variations of the barometer are said to take place on the shore of the *Atlantic* a day and a half earlier than at *St. Petersburgh;* but in neither case is the difference regular. However, all the information of every kind that I can gather on the subject would lead to the belief that the changes generally do take place earlier towards the northern and eastern parts of the country, later towards the southern and western. I am speaking, of course, of Northern India, having as yet no lists from the south of the *Nerbudda.*

I have not endeavoured to connect the appearances observed with the position of the moon, unaware of the difficulties which attend such a supposition, but because I was at a loss to find one which would account for the phenomena better. As to the appearances themselves, the variations in the price of corn and their recurrences, they of course will rest upon better or worse evidence in proportion as the multiplication of lists from different parts of the country confirm, or not, the indications they afford. From the nature of the subject, much accuracy in the conclusions cannot be hoped for : nevertheless by perseverance some truths may be elicited, which may serve to direct philosophical research, and perhaps to give us some insight into what is likely to happen for the future, in the absence of all better information.

V.—*On the Climate of Darjíling.*

We make an exception to our general rule of not inserting meteorological registers except in abstract, in favor of the following six months' diary kept by Doctor CHAPMAN at the new station of *Darjíling* in the *Sikkim* portion of the *Sub-Himálayan* range, because it is very important that every information should be made public in regard to the climate of a place selected, or at least proposed, as a sanatarium for the recruiting of exhausted Bengálí constitutions, more accessible than the far western hills of *Simla* and *Masúrí,* or the eastern station of *Chirra Punjí.*

Before Doctor CHAPMAN started on his official deputation to *Darjíling,* his instruments were carefully compared with the standards registered in this Journal. He was particularly requested to attend to the wet-bulb depression, as compared with the dew point; and to the

boiling point of water, as compared with the barometric indications. As his thermometer for the latter object was only divided to 2°, we have since despatched a new one of greater sensibility, whence we hope soon to obtain valuable data for the correction of the usual tables for the measurement of heights by the thermometer. The dew points noted are curious, sometimes higher than the wet bulb or evaporation point. Can this arise from an error in the DANIELL's hygrometer? We have always found a little iced water added drop by drop to a little common water in a highly polished gilded silver cup, the most trust-worthy mode of taking the dew point. It can be depended on to the tenth of a degree.

Upon the strength of our observations in the December Journal we may, with confidence, calculate the altitude of *Titalya*, and *Darjiling* from the three months' observations of October, December, and January*. Thus applying the constant correction of—.004 to Dr. CHAPMAN's Bar. A, we have

Corrected heights of the Barometer at 8½ A. M. mean temperature of air 75°,	*Calcutta.*	*Titalya.*	*Altitude deduced.*
	29.894	29.626	ft. 255.7
At 4½ P. M, ditto, 84.5,	29.815	29.514	293.5
Average altitude of *Titalya*,			ft. 275.0

For *Darjiling* the data are more numerous:

	Calcutta.		*Darjiling.*		*Altitude. calculated.*
	Barom.	*Temp.*	*Barom.*	*Temp.*	*feet.*
Dec. 1836, obs. 9 A. M.	30.098	68.0	23.367	44.6	6925.1
Ditto, ——— 5 P. M.	29.989	75.	23.298	47.6	6973.1
Jan. 1837, obs. 9 A. M.	30.073	68.	23.322	42.1	6942.2
Ditto, ——— 5 P. M.	29.970	75.	23.247	43.4	6989.9
Mean altitude by 120 obs. of the Barometer,					ft. 6957.5

The altitude of *Darjiling* hill by two observations of Capt. HERBERT, published with his report in the *Gleanings of Science*, is 7218 feet, or 250 feet higher than Dr. CHAPMAN's house. The altitude deducible from the thermometric indication of boiling water is only 6648.5; but little confidence is to be placed in the latter without a very accurate instrument. It is to be remarked also, that the barometric measure will shew a much closer agreement when not corrected by the multiplier for the assumed mean temperature of the stratum of air between the two stations, Unconnected they stand thus: 6595.8, 6578.4, 6624.6, and 6619.2; the maximum discrepancy from the mean 6604.5 being only 26 feet. A numerous series of barometrical results from similar tables will enable us to form a more correct appreciation of the influence of variations of temperature on the formula. N. B. The barometric heights above stated have been all reduced to 32°.

* We have since received the registers for February and March, which we insert, deferring observations till the series is completed.

Meteorological Register kept at Titalya, for the month of October, 1836.

	Barometer A.		Thermometer in the Air.				Regtg. Ther.		Rain.	Wind.		App. of Sky.		
	8½ A. M.	4½ P. M.	8½ A. M.	Depression of m. bulb.	4½ P. M.	Depression of m. bulb.	Min.	Max.	Inches	8½ A. M.	4½ P. M.	8½ A. M.	4 P. M.	
1	29.506	.463	71	.5	73	1	69	73	4.53	E. N. E.	N. E.	Rain.	Rain.	
2	.592	.541	72.5	.5	81.5	5.5	70	82.5	1	N. E.	W.S.W.	ditto	Cum.	October 6th, 2 P. M.
3	.576	.533	71	.5	82.5	10	68.5	84	..	W.	S. W.	Fog.	Clear.	Thermometer in air 84°.
4	.672	.583	75	2.5	85.5	15.5	70	85.5	..	N. E.	S. W.	Cirri.	FewCum	Moistened bulb 72°.
5	.712	.630	75	4.5	83	14	66.5	83.5	..	N. E.	Calm.	ditto.	Clear.	Dew-point by Daniell's
6	.740	.664	73.5	3.5	85	13	70.5	85	..	N. E.	W.	Cum.	ditto	Hygrometer 72°.
7	.776	.673	76.5	6.5	87	12	68	87	..	E. N. E.	W.	Clear.	ditto	
8	.722	.615	75.5	6.	87	11.5	66	87	..	N. E.	W.	ditto	ditto	October 7th, 1 P. M.
9	.727	.652	76	4.5	88.	14	66	88	..	N. E.	Calm.	ditto	ditto	Therm. 85, Moist. bulb 72°.
10	.754	.672	75	5.	87.5	12	67	88	..	E.	W.	ditto	ditto	Dew-point by Hyg. 73°.
11	.768	.695	76	5.5	88	12.5	68	88	..	N. E.	W.	ditto	ditto	
12	.763	.648	76	4.5	86.5	11.5	69	87	..	E. N. E.	W.	ditto	ditto	October 14th, 1 P. M.
13	.742	.684	77	4.	85.5	11	70.5	88	..	N. E.	W.	ditto	ditto	Therm. 84o, Moist. bb. 73.5
14	.738	.662	75.5	3.	84.5	10	69	85.5	..	E.	W.	do fog ear	ditto	Dew-point by Hyg. 75°.
15	.690	.653	67.5	2.5	82.5	10.5	64	84.5	..	W.	W.	do. do.	Cum.	Water boils 211.24.
16	.723	.660	68.5	3.	79	13	62.5	81	..	E.	S. W.	Few cum	Clear.	Barometer 29.700.
17	.792	.713	70	3.	82	14	64	82	..	N. E.	E. S. E.	ditto	ditto	October 19th, 1 P. M.
18	.805	.722	70	3.5	82.5	14.5	65	83	..	N. N. E.	N. E.	Clear.	ditto	Therm. 83, Moist. bb. 69.5
19	.802	.727	69	5.	82.5	13	65	83.5	..	N. E.	S. W.	ditto	ditto	Dew-point by Hyg. 69°.
20	.826	.762	70.5	3.5	82.5	12.5	65	83	..	E. N. E.	W.	Cirri.	ditto	Water bls. 211.5 Br. 29.770
21	.837	.782	71	4.5	82	13	64.5	83	..	N. E.	W.	Clear.	ditto	October 21st, 1 P. M.
22	.883	.770	70	4.	81	13	64	83	..	E.	W.	ditto	ditto	Therm. 83, Moist. bb. 69o.
23	.820	.727	70	4.	82	12.5	63	83	..	E. N. E.	W.	ditto	ditto	Dew-point by Hyg. 68o.
24	.797	.694	72	6.5	82.5	14.5	64	82.5	..	E. N. E.	S. W.	ditto	ditto	Water boils 212°, Br. 29.800
25	.820	.740	71.5	4.5	81	14	64	83.5	..	E. N. E.	W.	ditto	ditto	October 31st, 1 P. M.
26	.808	.713	70.5	4.	81.5	11.5	64	82	..	N.	S. E.	ditto	ditto	Ther. 77, Moist. bulb 70o.
27	.783	.700	70.5	4.5	83.5	13.5	63	84.5	..	N.	Calm.	ditto	ditto	Dew-point by Hyg. 71°.
28	.780	.690	70.5	4.5	84	12	65	85	..	N. E.	S.	ditto	ditto	Water boils 211.5, Barome-
29	.782	.664	72	4.	84	12	66	85	..	N.	Calm.	ditto	C.Sto NE.	ter 29.736.
30	.768	.682	73.5	4.5	82.5	10.5	67	83.5	..	E.	S. E.	Cirri.	Cirri.	
31	.778	.666	71	3.	77	7	68	78.5	..	N. E.	E. N. E.	Cum.	Cum.	
Means,	29.750	.670	72.4	4.2	83.1	11.8	66.4	83.9						

Meteorological Register for the month of November, 1836, kept at Titalya and elsewhere.

Observations made at		Barometer A.		Thermometer in the Air.				Regtg. Ther.		Wind.		Weather.		
		8½ A. M.	4½ P. M.	8½ A. M	4½ P. M.	Depression of the moistened bulb. 8½ A.M.	4½ P.M.	Min.	Max.	Morn.	Even.	Morn.	Even.	Boiling Point at 8½ A. M.
Titalya, ..	1	29.742	29.644	70	79.5	3	9.5	65	80.5	E.	W. S. W.	Cum.	Cum.	
Ditto, ..	2	.640	.520	70.5	80.5	4	11.5	65	81.5	N. E.	W.	ditto	Clear.	
Ditto, ..	3	.616	.544	67	78	3	12.5	63	81.5	Calm.	W.	Fog, early	clr. do.	
Ditto, ..	4	.737	.686	63.5	80.5	2.5	16	59	81.5	N. W.	W.	ditto	ditto ditto.	
Ditto, ..	5	.804	.749	69	80.5	4.5	13	63	81.5	E.	W. S. W	Clear.	Fragts. cum.	
Ditto, ..	6	.820	.690	69	81	5	12.5	61	82	E. N. E.	S. S. W.	ditto	Clear.	
Ditto, ..	7	.760	.692	68	81	3.5	13	62	82	E.	S.	Overcast	ditto.	
Ditto, ..	8	.827	.748	68.5	79	5	12	61	81	E.	W.	Clear.	ditto.	
Ditto, ..	9	.846	.754	69	79.5	6	10	60.5	80.5	N. E.	Calm.	ditto	ditto.	
Ditto, ..	10	.771	.700	67	80	5	11.5	61	83	E. N. E.	ditto.	ditto	ditto.	
Ditto, ..	11	.793	..	66	..	6	..	60.5	..	N. E.	..	ditto	ditto.	
Ranee Dangah, ..	12	.720	..	65	..	..	..	61	..	N. E.	..	ditto	ditto.	
Teprah Munni, ..	13	.056	28,960	64	69.5	6	7.5	60	78	N.	N.	ditto	ditto.	210.8
Ditto, ..	14	.060	.940	66	70	9.5	8	60	78	N.	N.	ditto	ditto.	
Ditto, ..	15	28.978	..	63	..	8	.	60	..	N.	..	ditto	ditto.	210.6
Dimali Golah, ..	16	.231	.146	61	66.5	4	5.5	55	71	N. N. W.	S. W.	Cum.	Heavy cum.	209.0
Ditto, ..	17	.204	.128	60	69	5	6.5	54.5	72	N.	Calm.	ditto	ditto.	209.0
Ditto, ..	18	.229	.155	60	66	4	5	54	70	N.	ditto	ditto	Overcast.	209.2
Ditto, ..	19	.226	.141	60	68	5.5	6	52	72.5	E.	W. S. W.	Clear.	ditto.	209.0
Ditto, ..	20	.200	..	58	..	4	..	53 5	..	N. W.	..	Fragts	cum. ..	
Samdong, ..	21	27.169	27.070	57	62	2	3 5	48	70.5	Calm.	S. W.	Cirri.	Overcast.	207.6
Ditto, ..	22	.185	.100	58	63	3	5	50	73	N.	N. W.	Clear.	ditto.	207.4
Ditto, ..	23	.160	.053	57	64	2.5	5	46	70	N.	S.	ditto	ditto.	207.2
Ditto, ..	24	.150	.073	57	64	3	4.5	47	73.5	N. W.	N. W.	Cirri.	Cumuli.	207.4
Ditto, ..	25	135	..	54	..	3	..	46	..	N. E.	..	Clear.	..	207.6
Tikie Bong, ..	26	24.000	23.960	45	54	10	7	37	58	N. E.	S. W.	Bright.	Clear.	201.0
Ditto, ..	27	.073	24.054	46	55	6.5	7	40	60	N. N. E.	S.	ditto	Bright.	201.2
Ditto, ..	28	.137	.094	46	54.5	7	4.5	40	61	N. E.	S.	ditto	Misty.	201.5
Ditto, ..	29	.140	.079	47	52	4	5.	40	59.5	E.	S. W.	Misty to S.	ditto.	201.8
Ditto, ..	30	.126	.071	49	50.5	5.5	5.	42	56	S. W.	S.	Hazy.	Cumuli.	202.0

Meteorological Register kept at Darjiling, for the month of December, 1836.

	Barometer A.		Thermometer in the Air.				Regtg. Ther.		Rain.	Snow.	Wind.		Appearance of Sky.		Boiling Point at 9 A. M.
	9 A. M.	5 P. M.	9 A. M.	5 P. M.	Depression of moist. bulb. A. M.	P. M.	Min.	Max.	Inches		Morn.	Even.	Morning.	Evening.	
1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
3	23.386	23.329	47	46.5	6	6.5	38	51	Rain.	..	N. E.	S. E.	Fragts. cumuli.	Nimbi.	200.5
4	.348	.308	43	43	5	5	36	48	ditto	..	N. W.	N. W.	Overcast.	Overcast.	199.8
5	.392	.350	44	44	6	5	34	48	ditto	..	N.	E.	ditto	ditto.	199.5
6	.430	.394	42.5	43	4	4.5	35	47.5	..	Snow.	E.	N.	ditto	Cumuli.	200.0
7	.483	.430	43	47	8	9	33	50	..	..	E.	N. W.	Clear.	Clear.	200.3
8	.483	.440	44	50	9	8.5	34	54	..	..	N.	E.	Bright all day.		200.2
9	.475	.423	46	51	7	9	35	54.5	..	..	N.	Calm.	ditto		200.2
10	.434	.398	44	51	11	9	36	53	..	..	W.	S. W.	Clear.	Few cirri.	200.0
11	.403	.358	45	50	8	11	35.5	53	..	..	Calm.	W.	ditto	Cirri.	200.0
12	.373	.333	43	49.5	7.5	10	36	51.5	..	..	N.	W.	Clear all day.		199.7
13	.393	.332	42.5	45.5	5	7.5	35.5	51.5	..	..	N E.	N. W.	Few light cumuli.	Few cumuli	200.0
14	.368	.317	45	50.5	8	8.5	36.5	56	..	..	W.	N. E.	Cirri.	Cirri.	199.5
15	.371	.320	42.5	46	5	6	36.5	51.5	..	..	W.	W.	Overcast, cldy. all day.	Overcast.	199.7
16	.400	.314	45.5	51	9	10	32.5	54	..	..	N.	W.	Clear all day.		200.0
17	.386	.296	46	50	8	9	33	53	..	..	N.	Calm.	ditto		199.7
18	.392	.341	46	52	9.5	12	34	53	..	..	W.	W.N.W.	ditto		200.0
19	.454	.370	47	52	10	9	35.5	54	..	..	N. E.	Calm.	ditto		200.0
20	.392	.312	52	51	9	9	35.5	54	..	..	S.	S.	Clear, a few clouds at noon.	Clear.	199.8
21	.385	.303	45.5	48	5.5	7	36.5	53.5	..	..	E.	S.S.W.	Overcast, cloudy all day.	Overcast.	199.8
22	.341	.289	45	46	6	5.5	38	50.5	..	..	W.S.W.	S. W.	Misty all day.		200.0
23	.326	.254	44	49	7	7.5	33	52	..	..	W.S.W.	W.	Few cumuli.	Overcast.	200.0
24	.330	.270	46	45	5	4	33.5	48.5	..	..	Calm.	W.S.W.	Cumuli.	Cumuli.	200.2
25	.342	.274	41	42	4	4	35	50	..	..	N.N.E.	N.	Overcast.	Overcast.	200.0
26	.343	.288	43	46	5	7	34	49	..	..	N.	W. S. W.	Clear all day.		200.0
27	.386	.324	44	48	5	8.5	33.5	49.5	..	..	N. N. E.	S.W.	Fragts. cum. do., ¾ day.	Few cum.	200.0
28	.412	.356	41	45.5	6	7	34	50	..	..	S.	W.	Cumuli.	Clear.	200.0
29	.480	.412	41	48	5.5	7	34	51	..	..	N. N. E.	Calm.	Clear all day.		200.2
30	.452	.320	51	49	18	9	38.5	55	..	..	N.	S. W.	Bright all day.		200.2
31	.331	.228	46	43	8	5.5	34	50.5	..	..	S.	S. W.	Clear.	Overcast.	200.0
	23.396	.334	44.6	47.6	7.3	7.6	34.9	51.6	..	..					200.0.

3rd, 4th, and 5th. Distant thunder in the afternoon and light showers during the nights ; quantity of rain not measured.
6th. A few flakes of snow fell about 2 P. M. To the W. and N. W. heavy snow showers.
30th. Depression of moistened bulb Thermometer at 9 A. M. 18°. Dew-point of Hygrometer 29°. Min. Temp. during the night,.. 38.5.
Ice above ½ an inch thick in the morning.
Hoar frost and ice every morning, excepting 15th, 20th, 21st, 22nd, and 24th.

Meteorological Register kept at Darjiling, for the month of January, 1837.

	Barometer A.		Thermometers in the Air.				Regtg. Ther.		Rain.	Snow.	Wind.		Appearance of Sky.		
	9 A. M.	5 P. M.	9 A. M.	5 P. M.	Depression of moist. bulb. A. M.	P. M.	Min.	Max.	Inches		Morn.	Even.	Morning.	Evening.	Boiling Point at 9 A. M.
1	23.333	23.272	43	42.5	5	5.5	34	50.5	..	..	Calm.	W.	Cumuli, cloudy all day.	Overcast.	200.0
2	.323	.233	42	42.5	6	5.5	34	46.5	..	..	ditto	Calm.	Cumuli ditto.	Cumuli.	199.8
3	.340	.298	40.5	45	7	7.5	32.5	49.5	..	..	N.	W.	Clear all day.		199.8
4	.400	.308	52	51	16	17	36	54	..	..	Calm.	Calm.	Bright all day.		200.0
5	.341	.240	55	48	16	8	39	56	..	..	N.	ditto	ditto do., very thick ice this night.		200.2
6	.341	.269	45.5	44	9	5	34.5	51	..	..	N.	S. W.	ditto ditto.	ditto ditto	200.0
7	.365	.330	44	44	5	6	33	48	..	..	Calm.	W.	Clear all day.	ditto ditto	200.0
8	.430	.366	44.5	45	7	6	31	51	..	..	N.	W.	ditto ditto	ditto ditto	200.0
9	.404	.336	47	44	8.5	5	34	50.5	..	..	Calm.	W.	ditto ditto	ditto ditto	200.0
10	.380	.268	31	37.5	*	5.5*	31	37.5	..	Snow.	W.N.W.	E. N. E.	Hvy. sn. till after 12.	Cr. & cr. strat.	200.0
11	.380	.322	39	40	5	2	29	45	..	..	N. E.	Calm.	Bright.	Overcast.	200.0
12	.390	.350	40	43	4	3.5	31	45.5	..	..	S. S. E.	N. W.	Clear all day.		200.0
13	.404	.316	38	41	3	3	33	45	..	Sleet.	N.	Calm.	Few cum.	Overcast.	200.1
14	.413	.311	39	38	3	2	31	41	..	Snow.	N. N. E.	ditto	ditto	ditto	200.0
15	.411	.344	37	41	2.5	2.5	30	43	..	..	N.	W. S. W.	ditto	Cumuli.	200.0
16	.449	.372	40	41	5.5	4	30	47.5	..	..	N.	E. N. E.	Few cr. Clr. S. & E.	Ovrst. N. & W.	200.0
17	.391	.308	42	44	4	3	32	47	..	..	S. W.	W.	Cirri.	Overcast.	200.0
18	.412	.348	42	46	6	4.5	31	50.5	..	..	N. N. E.	W.	Clear all day.		200.0
19	.391	.268	40.5	43	2.5	2	31.5	47	..	..	Calm.	W.	Ovrst. clr. N. & N. W.	Hzy cum. W.	200.0
20	.284	.181	42.5	41	2.5	1	34	42.5	..	..	W.	Calm.	Overcast hazy W.	Misty.	200.0
21	.280	.221	42	41	3	3	34	46	..	..	S. S. E.	N.	Mist and haze.	Overcast & hazy.	199.8
22	.280	.190	40	44	2	2	31	46	..	..	Calm.	W.	ditto ditto	Mist.	199.8
23	.278	.232	45	45.5	2.5	2	34	45.5	..	..	W.	Calm.	Overcast and misty.	ditto	200.0
24	.267	.204	42	46.5	3	2.5	34	48.5	..	..	N.	W.	Fragts. cumuli.	ditto	199.5
25	.273	.220	44	47.5	2	3.5	34.5	48.5	..	..	N.	S. W.	Misty.	Cumuli to W.	200.0
26	.268	.208	44	44.5	3.5	4.5	36	49	.06	Hail.	SW. sqls	W. sqls.	Cumuli, hail and rain.	Clr. cum. N.	200.0
27	.236	.184	40	47	3	6	33	51	.09	..	N.	W.	Clear.	Clear.	199.5
28	.232	.192	40.5	40.5	2	3.5	31	44	.05	..	N.	Calm.	Misty.	Rain.	199.5
29	.270	.300	40	43	3	2.	30	47.5	..	..	N.	N.	Clear.	Overcast and misty.	200.0
30	.365	.270	45	45	5	3.	33	48	..	..	Calm.	W.	Few cumuli.	ditto ditto	200.3
31	.305	.244	40	40	2.5	1.5	32	42	..	..	N. E.	Calm.	Cum. and hazy.	Thick mist.	200 0
	23.346	23.274	42.1	43.4	4.9	4.2	32.8	47.2	0.20						

10th. At 4 A. M. distant thunder from the S. At 5 A. M. severe thunder storm from S. with heavy snow shower. Snow continued to fall till noon, by which time it was one foot deep on the ground. Some snow remaining on the ground till the 20th.

* The *moistened* muslin frozen. Hoar frost and ice every morning, excepting the 1st and 21st.

Meteorological Register kept at Darjiling, for February, 1837.

	Barometer.		Thermometer in the Air.				Regtg. Ther.		Rain.	Snow, &c. &c.	Wind.		Appearance of Sky, &c. &c.		Water.
	9 A. M.	5 P. M.	9 A. M.	5 P. M.	Depression moist. bulb. A. M.	P. M.	Min.	Max.	Inches		Morn.	Even.	Morning.	Evening.	Boiling Point.
1	23.344	23.284	43	42	3	2	33	48			Calm.	Calm.	Overcast and haze.	Haze and mist.	200.0
2	.334	.270	43.5	42.5	4	2	34	48			S. W.	ditto	Cum. haze N. & E.	Cum. haze N.	200.0
3	.394	.332	42.5	45.5	3	3.5	33.5	48.5			N. E.	W.	Thick hz.&mistN.&E.c.S.Hz.N.cum.dis.		200.3
4	.429	.347	49.5	50.5	6.5	6.5	34	53			W.	S.	Cum. disp. hazy N.	Cirri. haze. N.	200.6
5	.362	.237	47 5	47	3	5	33.5	52			Calm.	W.	ditto	Hazy cum. S. and W.	200.2
6	.318	.229	42	45	5	2.5	34	52.5			N.	W.	Few cum. intersp.	Overcast.	200.0
7	.364	.318	47	49	4	5.5	35	53			Calm.	W.	Gen. clear,haze. N.	Hazy N. cum. S.	200.3
8	.416	.350	43	48	2	3	35	54.5			N.	W.	Cloudy, hazy N.	Cirri. horizon hazy.	200.5
9	.366	.283	45.5	45.5	3.5	1.5	37.5	52			S.	W.	ditto hazy near horizon.	Rain.	200.3
10	.354	.280	45	43.5	2.5	2.5	36	48	0.04		Var.	E.	Horizon hazy.	Cirri. cum. N.	200.2
11	.280	.191	47	44	5	1.5	37	48	0.19		Squalls.	S.	Cum. S.W.W.&N.W.	Ovst.dist.thunder.	199.8
12	.181	.124	42	41.5	1	1.5	34	42	0.18	[2 in.	S.	W.	Rain.	Rain.	199.5
13	.187	.157	37	42	1.5	4	29	45	0.11	Snow,	N.	S.	Clear S. W. rest misty.	Clear.	192.5
14	.255	.177	34	36	2.5	3	26	44		Hail.	N. E.	S.S.W.	Generally clear.	Cumuli.	200.0
15	.293	.252	36	37	4.5	4	25.5	43			N. E.	W.	Clear.	Overcast.	199.8
16	.272	.213	35	37	2	2	28.5	38		Snow	S.S.W.	S.	Snowing.	Thick mist.	199.5
17	.348	.327	38	42.5	2	2.5	29	44		[½ in.	Calm.	W.	Overcast, clear N.	Mist.	200.0
18	.376	.320	41	40	2	2	33.5	50			S.	N.N.E.	Mist.	Cum. strat. and haze.	200.0
19	.359	.328	43	50	2	3	33.5	53			Calm.	W.	Generally clear.	Few cumuli S W.	200.0
20	.369	.353	43.5	51	1.5	3	36.5	54			N. E.	N.	Thin mist.	Clear.	200.0
21	.442	.411	46	52	2	6	37	55			N. N. E.	W.	Clear.	Cum. S. hazy N.	200.3
22	.450	.381	45.5	51	1.5	4	38	55			Calm.	W.	Haze and mist.	Few cirri.	200.5
23	.396	.315	52	51	6	3	37	57			N. N. E.	W.	Bright.	Light haze.	199.8
24	.368	.296	47	46	2	2	38	50			Calm.	S.S.W.	Overcast and haze.	Overcast and hazy.	200.2
25	.277	.194	45.5	48	2.5	2.5	37	53			S. W.	S. W.	Thin mist.	Light clouds.	199.5
26	.227	.179	44.5	46	3.5	2.5	38.5	52			N.	S. W.	Cirri. & cir. strat.	Hazy cum.N. & N.W.	190.8
27	.276	.237	46.5	51.5	1.5	4	37.5	55			N.	W.	Cirri.	Cumuli.	200.0
28	.346	.294	46	49	1.5	3	38	53			N.	S.W.	ditto	Cum. strat.	200.0
	23.335	23.274	43.5	45.5	2.9	3.1	34.2	50	0.52	3½ in.					

Frost on the 2nd, 4th, 5th, 6th, 7th, 8th, 10th, 13th, 14th, 15th, 16th, 17th, 19th, 20th, 21st, 22nd, 23rd, and 27th.
The Max. Temperature by frequent observation of the common Thermometer.—Registering Thermometer out of order.

Meteorological Register kept at Darjiling, for March, 1837.

	Barometer.			Therm. in the Air.			Regtg. Ther.		Danl. Hygt.		Rn.	Wind.	Weather, &c &c.		Blg. Point.	
	10 A. M.	4 P. M.	10 P. M.	M. bb.	4 P. M.	M. bb.	Min.	Max.	Dew-point. 10 A.M.	Dew-point. 4 P.M.	Inches	Morn. Even.	*Morning.*	Evening.	By Ther. No. 1.	By J. P's.
1	23.432	23.[illegible]4		49	51	45	38.5	55	48	44		Cm. W. S. W. stg	Hazy.	Cirri. and haze.	200.0	..
2	.380	.[illegible]55		47.5	55	48.5	40	56	46	46		S. W. W.	Cirri.	Clear.	199.8	..
3	.342	.[illegible]46		44	56.5	46.5	40	58	43	44.5		Cm. S. W. stg.	ditto	Gen. clear.	199.5	..
4	.376	.[illegible]52		46.5	53.5	48	37	55.5	45.5	48		N. E. Rariable	Clear.	Few cum.	200.0	..
5	.379	.[illegible]3.5		46	54	49	39	56	45	49		S. S. S. W.	ditto	ditto	200.3	..
6	.375	.[illegible]52.5		49	54	49	39.5	55	48	48.5		Calm. S. W.	ditto	Clear.	200.0	..
7	.384	.[illegible]		47	53	47.5	40	55	47	47.5		ditto S. strong.	ditto	Clear horizon N. hazy.	199.7	199.7
8	.417	.[illegible]		51.5	56	50.5	42.5	59	51	50		ditto W.	ditto	Clear.	199.7	199.7
9	.439	.[illegible]		50	53	49	43.5	56	50	49		ditto S. W. stg.	Light haze.	Cirri. and haze.	199.7	199.7
10	.412	.[illegible]		49	56	50.5	45	58	49	50		S. W. W.	Clr. ab. hor. cloudy.	Gen. ovrst. cr. & cu.	199.8	199.8
11	.332	.[illegible]		44.5	55.5	44.5	43.5	59	37	42		N. S. S. W.	Clear.	Clear.	199.6	199.6
12	.388	.[illegible]		46	55	47.5	41.5	59	43	47		S. light. S.	ditto	ditto	199.8	199.7
13	.434	.[illegible]		46	54	47	41	58.5	45	47*		Calm. W.	ditto horizon hazy.	Cirri and hazy.	200.0	200.0
14	.287	.[illegible]		47	50.5	43	41	54	45	41*		S. W. S.	Few cum. horizon hazy.	Cum. S. & W.	199.6	199.5
15	.215	.[illegible]		46	54	46	37	54	44	44		N. E. W.	Clear	Cum. & haze.	199.5	199.5
16	.307	.[illegible]		47	53	47	40	55	46	46		N. N. E.	ditto horizon hazy.	Ovrst. & thick haze.	199.5	199.5
17	.400	.[illegible]5.5		48	55	48	43	59	47	47		N. E. W.	Clr. above, cum. S. & E. haze.	N. do. do.	200.0	199.7
18	.396	.[illegible]1.5		49.5	56	49.5	43.5	57.5	48.5	48.5		N. E. W.	Cum. S. thick haze N.	ditto ditto	200.0	199.8
19	.360	.240	56.5	52	52	48.5†	43	59	52	49†		N. S. W.	Cum. intspsd. thick haze N.	Raining.	200.0	199.8
20	.325	.246	56.5	51.5	59	52	44	60.5	51	52	0.03	N. E. W.	Cum. S. haze N.	Cum. hazy N.	199.8	199.6
21	.270	.162	56.5	51.5	53.5	58	45.5	60.5	51.5	48		W. W. S. W.	Cum. S. E. hze. N. clr. above.	Ovrt. & hzy.	199.5	199.5
22	.276	.223	59	50	60	51.5	43	63.5	50	49	0.07	N. E. Calm.	Clear.	Partially overcast, hazy.	199.5	199.5
23	.379	.319	58	51	56.5	51	45	61	50	51		W. S. S. W.	Genl. clear. horizon hazy.	Ovrst & hazy	200.0	199.8
24	.396	.326	54	50	54	51	47	58	50	51		W. Calm.	Overcast and hazy.	ditto ditto	200.0	199.8
25	.373	.300	53	51.5	56	52.5	47	57.5	52.5	52.5		Calm. W.	Misty.	ditto ditto	200.0	..
26	.364	.314	55	52.5	58	54.5	48	58.5	52	54		W. Calm.	Hazy.	ditto ditto	199.8	..
27	.375	.284	58	55.5	59.5	54.5†	50	61.5	55.5	55†		W. W. stg.	Mist and haze.	Cum. S. & W. mist N. & E.	200 0	..
28	.252	.158	65	53.5	65	50	49	66.5	51	40.5		N. light. S. W. do	Bright.	Bright above horizon. hazy.	199.6	..
29	.191	.070	61	48.5	61.5	45.5	48	64	42	36		S. W. S. W. do.	ditto horizon hazy.	ditto ditto	199.4	..
30	.237	.179	62	49	59.5	48	47	62	40	41		Calm. W.	Clr. above hor. thick haze.	Hor. hazy.	199.4	..
31	.310	.221	58.5	47.5	59	48	45	61.5	43	41.5		Variable. W.	Horizon hazy, clr. above.	Thick haze.	199.7	..
Mns	23.348	23.265	56	48.9	55.7	48.7	43.1	58.4	47.3	47.2	0.10					

* 13th, { Dew was deposited on the bulb at 40° } but immediately vanished. 2nd observation gave the results as stated in the column.
14th, { ..... 45° }

† 19th, and 27th. No mistake: the dew-point was carefully observed thus.

Difference between Barometer on Capt. Herbert's station at Darjiling hill, and mine, .063 in. at 56°.

VI.—*Note on the Genera Oxygyrus and Bellerophon.* *By* W. H. BENSON, *Esq. B. C. S.*

When I described the *Pelagian* genus *Oxygyrus* in the 4th volume of the Journal, from specimens taken on the surface of the Indian and Southern Atlantic oceans, it did not occur to me to search for cognate genera in any other order than that in which the characters of the animal showed its place to be; still less did I expect to find any fossil shell allied to it; but recent consideration of the recorded characters of the fossil genus *Bellerophon* of MONTFORT, which was placed by that author among the *Polythalamous Cephalopodes*, and was subsequently removed by DEFRANCE, on account of the absence of septa, to the neighbourhood of *Argonauta* among the *Monothalamous Octopoda*, suggests the opinion that this shell is improperly associated with the *Cephalopoda*, and that its real station is among the *Nucleobranchous Gasteropoda*, with *Atlanta* and *Oxygyrus*, to the latter of which genera it appears to be intimately related.

The manner in which the umbilicated species of *Bellerophon* are convoluted, the acute keel which is observable in some species, and the sinus which indents that keel within the aperture, are characters which denote the affinity of the two genera; while the prolongation of the lips on either side beyond the umbilicus, and the shelly texture of *Bellerophon*, contrasted with the absence of any prolongation of the lips, the subcorneous nature of the habitation of *Oxygyrus*, and the sudden truncation of its partial keel, form sufficiently prominent characters to distinguish them as generic groups.

That no recent species of *Bellerophon* has hitherto been discovered, may be possibly owing to the *Pelagian* habits of the genus, and the paucity of observers of the interesting Oceanic *Testacea*. Without specimens I am unable to decide on a point on which RANG and DEFRANCE are at issue; the former stating, in his Manuel, that the shell of *Bellerophon* is thin; whereas, in the first volume of the Zoological Journal, DEFRANCE contrasts the great thickness of that shell with the thinness of that of *Argonauta*. Even supposing the latter statement to be correct, weight will not be considered likely to interfere with the *Pelagian* habits conjecturally attributed to the genus, it being now well ascertained that the ponderous *Nautilus Pompilius* ascends to the surface of the ocean with as little difficulty as the lightest of the naked *Cephalopoda*.

P. S.—In vol. 4, p. 175, there is a misprint in regard to the locality of *Oxygyrus*. 29° 30′ S. lat. should be 39° 30′ S. lat. The

erroneous locality is possessed of a temperate climate, whereas the real one is occasionally subject to the invasion of fields of ice, and therefore more strongly contrasted with the observed habitats in the vicinity of the line, and in the Bay of *Bengal*.

VII.—*Proceedings of the Asiatic Society.*

Wednesday Evening, 3rd May, 1837.

The Hon'ble Sir EDWARD RYAN, President, in the chair.

Colonel D. MACLEOD, Engrs. M. A. BIGNELL, Esq. Capt. S. F. HANNAY, and Dr. W. GRIFFITH, were elected Members of the Society.

Dr. J. SWINEY and Lieut. M. KITTOE. 6th N. I. were proposed by the Secretary, seconded by Capt. CUNNINGHAM.

Professor O'SHAUGHNESSY, proposed by Dr. CORBYN, seconded by Sir E. RYAN.

G. W. BACON, Esq. C. S. proposed by Dr. FALCONER, seconded by Mr. MACNAGHTEN.

FRANCIS ROBINSON, Esq. C. S. *Futtehgurh*, proposed by Captain FORBES, seconded by Mr. MACNAGHTEN.

The Bishop of Cochin-China returned thanks for his election.

Read extract of a letter from Major TROYER, the Society's Agent at *Paris*, proposing that honorary membership should be conferred on Baron SCHILLING of *Cronstadt*, the Mongolian and Tibetan scholar.

[Referred to the Committee of Papers.]

Major TROYER mentions that M. GUIZOT, Minister of Public Instruction, is about to sanction a yearly grant of about 2,000 francs, for procuring copies of Sanskrit manuscripts from *Calcutta*. The study of the Oriental languages is increasing fast on the Continent, and a fresh supply of our publications indented for on *London* has been immediately disposed of. Capt. TROYER'S French translation of the *Raja Tarangini* would not issue from the press under a year, on account of the difficulties of printing the Sanskrit text.

Read a letter from the Secretary to Government, General Department, directing the packages of Oriental books to be sent to the Export Warehouse-keeper, and passing the bill for their package, Rs. 17.

The Secretary reported the death of BEHADUR, the pensioned *furash* of the Museum, who had been on the establishment since Sir WILLIAM JONES's time. He was with his wife burnt to death in one of the late dreadful conflagrations.

The account current of the Society with Messrs. MORRIS, PREVOST and Co. shewed a balance of £75 18 1 in favor, after paying the arrears due to the Oriental Translation Fund.

A letter from N. CARLISLE, Sec. Antiquarian Society, dated November, 1836, acknowledged the receipt of the Journal for 1835.

Library.

The following books were presented.

Two copies of the Address by Earl STANHOPE to the Medico-Botanical Society, January 1836, received from that Society through the Government.

Voyage autour du Monde: the Experimental Voyage of the French corvette *Favorite* in 1830-32, by Capt. LAPLACE,—*presented by* M. FORTUNE' EYDOUX, *Med. Officer and Naturalist of the Frigate La Bonite.*

The Quarterly Journal of the Calcutta Medical and Physical Society, Nos. I and II.—*presented by the Editors, Professors Goodeve and O'Shaughnessy.*

From the Booksellers; Lardner's Cabinet Cyclopedia, Literary Men, 1.

Meteorological Journal for March,—*by the Surveyor General.*

Antiquities.

Read the following letter from Lieut MARKHAM KITTOE, 6th N. I. dated 2nd April, announcing that in compliance with the Society's desire he had visited *Khandgiri*, in order to re-examine the inscription published by the late Mr. STIRLING.

"Agreeably to the request contained in your letter of the 20th ultimo, of which I have the honor to acknowledge the receipt, I proceeded on Monday last to *Bovaneswar* and *Khandgiri*, and examined the inscription given by STIRLING in vol. XV. page 313 of the Asiatic Researches. I found that only part of the inscription is given, and that, too, appears faulty. I was unable to attempt a facsimile, not being provided with scaffolding or ladders, which are indispensably necessary for that purpose. I shall therefore again visit *Khandgiri* in the course of a few days, when I hope to be enabled to furnish a detailed account of the place and of the remarkably curious caves and sculpture existing there.

"The inscription is immediately over a tolerably large cave on the southern face of the hill; unfortunately a great part of it is obliterated: I am, however, in hopes of making out a number of the apparently lost letters by a method I adopt of casting different degrees of shade on the surface, and which I have found to assist greatly in deciphering those of which there is the least shadow remaining.

"I did not rest with observing this cave, as I saw no reason why others more extensive should not possess like inscriptions; in this conjecture I was not altogether mistaken: for I found almost all, large or small, to have more or less writing, some only having one word of six or eight letters (probably the names of the originators of these hermitages), others, sentences. I discovered no less than 14, of 13 of which I enclose copies: of these, four are apparently Sanskrit, one (a name) in a new character, and the rest in the column character.

"I have further great pleasure in announcing the discovery of the most voluminous inscription in the column character I have ever heard of: it was shown to me by the same ascetic who had assisted me before.

"It is on a low rocky hill under a high and isolated one, a mile to the west of the *Pooree* road, and near *Piplee* at the N. W. corner of the famous tank named *Kouslagung* it is called '*Asuastoma*.' There is neither road nor path to this extraordinary piece of antiquity. After climbing the rock through thorns and thicket, I came of a sudden on a small terrace open on three sides with a perpendicular scarp on the 4th or west, from the face of which projects the front half of an elephant of elegant workmanship, four feet high: the whole is cut out of the solid rock. On the northern face beneath the terrace, the rock is chiselled smooth for a space of near 14 feet by 10 feet, and an inscription nearly cut covers the whole space. It is divided apparently into four paragraphs, two of about 36 lines each, a third of about 20, and a fourth of 9½ lines, encircled by a deep cut frame or line, evidently to distinguish it from the other inscription. I took a facsimile of it, as well as of 19 lines of the centre paragraph: this took me a whole day to perform. I shall copy the remainder on my return thither before going to *Khandgiri*, as I consider it of far more importance than the one there, a very small part of it being obliterated. A number of new letters occur, and variations of those already known. I am preparing a list of all, which I shall lay before the Society together with all the facsimiles when finished."

Lieut. KITTOE had met with obstructions in his inquiries from a mistrust of the resident brá'hmans, which he found to originate in their temples having been robbed some years ago of slabs containing inscriptions, by some officer; and he strongly urged the justice of restoring any such that might have come into the Society's possession. One he suspected, from its dimensions, was the identical one published in the Journal for February.

The Secretary stated that on examination he found this to be the case, as a second inscription of precisely the same character, now under publication, contained the name of the Rája of *Orissa*, who founded *Bhubaneswar* temple. The Meeting resolved unanimously, that the slabs should be restored, and that Lieutenant KITTOE had their warmest thanks for the suggestion.

Read a letter from Lieutenant SALE, Engineers, dated *Alláhabad*, in April, forwarding a facsimile taken on cloth and paper of an inscription at *Kalinjer*, situated at the entrance of a temple of *Mahadeva*.

The greater part of this inscription being obliterated, it will be impossible to make any profitable use of the facsimile, but it has been so far useful as to enable us to ascertain that another large slab in the Museum in the same peculiar character, must be the one stated to have been brought from the same fort and presented by General STEWART.

"The inscription," Lieutenant SALE writes, "is cut on black marble: portions of it are effaced by former clumsy attempts to take copies, which have destroyed the letters. The date appears to be only about 700 years back, and the text contains the name of a certain rája by name PARMA'LIK. The resident bráhmans give a curious tradition of the origin of the palace and fortifications of *Kalinjer*, attributing them to the virtues of a mineral spring which cured a rája in the *Satya yuga* from a loathsome cutaneous disorder."

The Secretary exhibited Mr. VINCENT TREGEAR'S splendid collection of the GUPTA gold coins, which had been intrusted to him for the purpose by the proprietor, whose zeal in this line of research had been attended with remarkable success.

The box contained 40 gold coins of the series—principally of CHANDRA, SAMUDRA, KUMARA, SKANDA and MAHENDRA GUPTAS: also the new *Vicramaditya* type, and the celebrated ARDOKRO coin.

Lieutenant KITTOE had just added a new name to the same list from a coin in the possession of an officer at *Pooree*. It bears the title *Báladitya*, and a name not yet well deciphended, NARA, perhaps intended for NARAYANA GUPTA.

Physical.

The following observations on the declination and inclination of the magnetic needle made at *Diamond Harbour*, were obligingly communicated to the Society by the chief hydrographer of the French corvette *La Bonite*, Captain VAILLANT, during her sojourn here.

The instruments used were of extreme delicacy, with a contrivance for changing the agate of suspension which is found to be worn away by the platina point on which it revolves. The poles of the magnets are changed at every observation so as to remove all index error.

It will be seen that gradual change has taken place since the observations of M. BLOSSVILLE and Colonel HODGSON, published in the As. Res. Vol. XVIII. On referring also to experiments made at *Benares* some years ago, the same fact is confirmed. The following table embraces an abstract of the whole of the observations.

Declination, or Magnetic variation.

1813, Mean of Maj. HODGSON's obs. in N. West Provinces,....	0	41	East.
1821, March, observations at *Benares*, by J. PRINSEP, ...	0	53	do.
1822, April,.....ditto,.....ditto, ...	1	1	do.
1825, March.....ditto,.....ditto, ...	1	27	do.
1827, November, at *Calcutta*, by Captain FABRE, ...	2	35	54 do.
by Surveyor General, ...	2	25	36 do.
1828, February, ditto, by ditto, ...	2	41	16 do.
1829, June, ditto, by ditto, ...	2	24	10 do.
1837, 14th April, at *Diamond Harbour*, *La Bonite*, 4 needles, ..	3	37	East.

Inclination, or dip.

1827, November, at *Calcutta*, by M. BLOSSVILLE,.....	26	32	38 N.
1832, February, ditto, by J. PRINSEP.....	26	42	? N.
1837, April, at *Diamond Harbour*, mean of four observations, by direct and indirect methods*, with two instruments, ...	26	39.	4 N.

The Secretary noticed that the bill drawn from Malacca on account of the *Tapir*, had been presented and accepted for Rs. 226 12—but the animal had not yet made his appearance.

M. CHEVALIER, mineralogist of the corvette *La Bonite*, requested the Society's acceptance of a series of Geological specimens from *Corsica*.

Lieutenant KITTOE presented specimens of the rocks in *Cuttack*:—also a snake (*Coluber mycterizans ?*) in spirits; thus described by the donor:—

"The snake was killed by a sipáhí in the hilly country west of *Cuttack*. It occurred to me that I had read of a similar reptile, and on referring to the Journal of the A. S. for April, 1835, page 217, I found the description (given there by Lieut. CAUTLEY) of one found near the *Sewalik* hills; mine, however, differs very materially in some points, though it answers nearer to the description given of the "snouted snake" in his note extracted from the Encyclopedia Britannica, as will be seen on comparing the following detail:—

	ft.	*in.*	
Extreme length of the reptile, ...	4	11	$\frac{3}{4}$
Circumference of the thickest part of body, ...	0	2	$\frac{1}{4}$
Ditto of the neck.....	0	1	
Breadth of the widest part of the head, ...	0	0	$\frac{7}{8}$
Length of ditto,.....	0	1	$\frac{3}{4}$
Projection of the upper jaw or snout, ...	0	0	$\frac{1}{4}$
Length from snout to the vent, ...	3	2	$\frac{3}{4}$
Ditto vent to end of the tail, ...	1	9	$\frac{1}{4}$
Abdominal plates or scales, ...	185		
Subcaudal to extremity of tail, ...	280		

The eye yellow, oval shape, with black horizontal pupil. Color, upper half grass-green, under half pea-green: has a white line on either side 1-16th of an inch wide for whole length, except towards the extremity of the tail, which is very sharp pointed. The lower jaws when the mouth is closed are even or nearly so with the upper, but when open, expand to near double the width. It has double rows of teeth in both the upper and lower jaws, and several in the upper, much larger than the rest, having the appearance of fangs. Its motion is described as that of rapid bounds, moving also swiftly on the leaves and branches of trees: the present specimen, however, was killed in the sandy bed of the *Mahánaddi*, near a bush, while in the act of catching a bird. See Plate XXIII."

Lieut. KITTOE in another note mentions the discovery of extensive coal beds in *Ungool* and *Hindoee*, near the *Kursooa* and *Byturnee* rivers.

The existence of the mineral at these places had before been made known to the Europeans, and specimens had been produced. Lieut. KITTOE was anxious to visit and survey the locality, that he might report in further detail, as, if conveniently situated for water carriage down the *Mahánaddi*, the coal might be made available for steamers touching at *Pooree*. The coal and iron mines are together.

Letter from Professor ROYLE inclosing Prospectus of the London Caoutchouc Company, and inviting the Society's attention to this new commercial product, which might be cultivated to any extent on the *Silhet* frontier and in lower *Assam*.

The present supply, from *Para* chiefly, is many thousand tons less than the demand for home consumption. The mode of gathering the juice for export followed at *Para* is approved of, but the Company or Patentees recommend in lieu of the clay balls, that wooden cylinders about the size of a quart bottle should be used. First dipped into clay water, they are immersed in the crude juice and hung up to dry; the dipping is thus repeated until a layer of Caoutchouc ½ an inch thick covers the cylinder

* The *indirect* method is by taking the dip *out of the meridian*, and reducing it thereto by a simple calculation; the agreement is very close.

about 6 inches high—this cup (shaped like a tumbler) is then drawn off and the cylinder used again.

The preference given to the solid clean rubber is doubtless consequent on the discovery of a very cheap solvent of Caoutchouc in the volatile coal-oil, which is collected in large quantities at the gas-works. When rectified it resembles in lightness and extreme volatility the distilled mineral naphtha, with which it is probably identical. The Caoutchouc dissolved in this menstruum, and spread in a coat between two folds of silk or cloth, regains its solid and elastic form without injury. Might not the naphtha springs of *Assam* be thus turned to account to introduce the manufacture at once there, with the durable silks of the valley as a basis? Professor ROYLE remarks, that all the trees on which the silk-worm feeds are found to contain the Caoutchouc principle, which is supposed to be essential to the production of the cocoon.

The splendid fossils from Dr. SPILSBURY of *Jabalpúr*, had arrived and were exhibited.

They consisted of the humerus and cubitus of an elephant, upwards of 15 feet in height; also a portion of the pelvis of the same animal; a very perfect elephant's head, ferruginized, of a smaller size, and the head and horns of a buffalo of large size. Dr. SPILSBURY pointed out no less than five new sites of fossils in the *Nerbudda* valley, two of them due to the zealous search of Major OUSELEY. His note along with sketches of the fossils shall appear in our next.

A paper on a new genera of *Raptores*, one on a new species of *Scolopacidæ*, and one on a new genus of the *Plantigrades* with a drawing, were received from B. H. HODGSON, Esq.

A second fossil bone was exhibited and presented by Major TAYLOR, brought up from the Fort boring at a depth of 362 feet below the surface.

A drawing of this fragment is given in Plate XXII.: it appears to be a fragment of the *scutellum* or shell of a turtle—much resembling some of the fragments found so plentifully among the *Jumna*, the *Siwálik* and the *Ava* fossils. It is mineralized just to the same extent as the bone exhibited at last meeting; sp. gr. 2·5, loss by heating red 10 per cent. A recent fragment found at the Sandheads by Dr. CANTOR, which had lost all its *inflammable* animal matter, had a sp. gr. 1·66.

The following specimens of natural history were presented.

A collection of shells, and two snakes preserved in spirits; by Mr. FELL, Indian Navy.

A collection of shells, by Lieutenant MONTRIOU, I. N.

A specimen of Squilla Mantis, by Lieutenant MONTRIOU, I. N.

A specimen of the Indian Sucking-fish (*Echeneis Indica*), and a fœtus of a species of ovi-viviparous shark preserved in spirits, by the Hon'ble Colonel MORISON, in the name of Mr. W. EWIN, Branch Pilot.

To the fœtus of the shark the yolk bag is still attached by the funis. Colonel MORISON states that a shark was caught at the Sandheads on the 8th of January last, which when opened was found to contain 17 young ones all marked and spotted like the present specimen, which was one of them, although the mother was of the bluish grey and white color, common to most species of the genus. The Indian Sucking-fish (*Echeneis Indica*) was found attached to her body.

Mr. J. T. PEARSON exhibited to the Meeting specimens of the larvæ, pupa and imago of the *Lamia Rubus*. FAB. and a log of the horse-radish tree, from which he extracted them.

Mr. PEARSON states, that having observed a tree at *Howrah* nearly dead from the ravages of insects, he purchased it, and on examination found it pierced in all directions with holes from ½ to ¾ of an inch in diameter, perfectly round, and more or less filled with a substance resembling coarse saw-dust. These holes were made by the large, long, square-shaped apodal larvæ of the *Lamia Rubus*; and on the tree being kept about two months, the perfect insects began to appear, which led to an examination of the interior, and the discovery of many specimens in the image state, and that of the pupa exhibited to the Society. Mr. PEARSON mentioned, that, as appears by the last part published of the Transactions of the Entomological Society, Capt. W. SAUNDERS, who paid much attention to Indian Entomology, had never been able to meet with the pupa of *Lamia Rubus*: therefore it may be new to science.

The change from the larva to the pupa in this species appears to take place about half way between the bark and centre of the tree; and on changing from the pupa to the imago state, the perfect insect works its way out, by eating with its strong mandibles a circular hole, about the same size as that made by the larvæ in the interior of the tree. The general direction of the passages made by the larvæ is perpendicular; while that of the exit of the imago is horizontal—the shortest way in fact to the air.

The second experimental year of the Curatorship having expired, Dr. PEARSON read the subjoined report on the operations of the Museum for the past year.

Report on the Museum of the Asiatic Society, by the Curator,—May 1837.

At the conclusion of the term of my charge of the Museum last year I stated the improvements that had been made; and how much it was to be desired that it should not be allowed to fall back into the state in which I found it twelve months before. I am now again called upon to report progress, and to request your attention to form some arrangement by which the evils I then deprecated may be averted, and an improved method adopted, if you wish to alter that which has been followed for the past two years.

The present state of your Museum may be mentioned in a few words. The arrangements of last year have been followed out, by improving the appearance of the apartments and by matting the floors; while by free ventilation the dampness, from which so much inconvenience was formerly experienced, has altogether disappeared. No enemy now remains indeed but the dust, which does much mischief by settling upon the specimens, and giving a dingy appearance to them; as well as by frequent leaning being required, and the inevitable injury to which they are in consequence exposed.

Improvements have also been made in the cabinets. They have been all glazed and made ready for the reception of specimens, save one, which is nearly completed. The subscription now on foot for this part of the Museum will render it all that can be wished.

A great number of specimens have been presented during the year; but owing to the insufficient means taken by their presenters to preserve them, only a portion could be made available to the purposes of the science. I may here state that, preparations, whether of skins or of insects, which have not been preserved by arsenical soap, or by some preparation of arsenic, are not proof against the attacks of insects in this country; even the so much vaunted solution of corrosive sublimate in spirits of wine is, as I have found after a fair trial, to be almost useless. But of the specimens presented, there have been mounted two hundred and thirty birds, ten of which are of large size; twenty-eight mammalia, and sixteen reptiles; eight skeletons have been prepared and articulated in the Museum; viz. those of the Orang-outang, the cow, the ass, hog, adjutant, two terrapins and a turtle. These are complete, with the exception of the first; and those who know by experience the labour of preparing and afterwards of joining together, or articulating as it is technically termed, the bones of a skeleton especially in this country, will be able to appreciate the labours of Mr. BOUCHEZ, to whom the praise of executing the manual part of them belongs. The bones of the Orang-outang were presented by Mr. FRITH, but the hands and feet having been unfortunately lost, they were restored in wood from those of the Sumatran gigantic ape in the Museum.

Besides the articulated skeletons there have been presented twenty-two other osteological specimens; consisting of the skulls of mammalia and birds, the jaw of a whale and the legs of the *Emeu*.

The other specimens consist of a few reptiles and fishes, and a considerable number of insects and shells.

Independent of the above, Mr. HODGSON of *Nipal* sent a series of upwards of eighty well preserved skins of birds, with the intention of their being placed in the Museum, as the originals from which some of the plates of his forthcoming great work have been taken; but circumstances having rendered it desirable to send them for the examination of a naturalist of eminence in England, they were, on his promising speedily to replace them, delivered over, by directions from the Secretary, for transmission there.

With regard to the financial arrangements, the Secretary did not think himself empowered to advance for contingencies any sum beyond that voted by the Society. But that sum being nearly absorbed by the salaries of Mr. BOUCHEZ and his nephew, who is employed to assist him, I have paid the remainder of the charges myself; and in this manner expended Co.'s Rs. 138 15 6, more than I have received.

A few words may be expected from me as to the future management of the Museum. Much has been urged against expending the funds of the Society for this purpose; and a strong protest on the same side, signed by five Members, has also been given in. So far as my own feelings are in question, I shall be happy to yield to this or any other view of the subject taken by the majority. Although I do not agree with those who think money ill expended, which is expended upon an object that contributes to further the pursuits of any considerable portion of the Society. And my respect for the protest would not have been less had it been signed by the older Members of the Society, instead of by those who had been elected only two or three months before the proceedings took place, against which they thought proper to protest; who mistook the mere lodgment of money in public securities for a vested fund; and who had not, I believe, any one of them, ever seen the Museum previous to, or since the new arrangements were made! Under these circumstances I am not inclined to allow much weight to the protest, nor to sacrifice our Museum in accordance with the views of the protestors. It is true, a substitute for a Curator has been proposed in a committee, each member of which should undertake a particular department; and as a body assisting with their advice, and superintending the operations of the Curator, such a committee would be of great service; but as an executive engine, a committee is always worse than useless, and I anticipate nothing but failure in the scheme. If your Curator is not a paid and responsible officer, you will, in effect, have no Curator at all; and if you have no Curator, you will have no Museum; while I am sure a Museum is, in the present direction of men's minds towards natural history, essential to the well-being, if not even to the existence of the Society. If our own funds cannot support our Museum as it should be supported, we ought to apply to the Government to assist us; when, judging from the liberal views of science taken by the present Governor General, and the anxiety he has evinced to encourage that of natural history in particular; coupled with the fact that the Court of Directors have ever been the patrons of zoological pursuits; there is little fear of our making the application in vain. I think the advantages of adopting this plan would be great and manifold; our Museum would be placed on a vigorous and permanent footing; and be the means of enhancing the prosperity of our institution, and of conferring no light benefit upon the public: while we should soon be able to wipe off the reproach so repeatedly and justly thrown upon the name of Englishmen in the East,—of leaving to distant nations the task and the honor of gleaning in our own field the treasures of natural history, which we ourselves are indifferent and too ignorant to reap.

J. T. PEARSON.

Resolved, that the Report be referred to the Committee of Papers for the purpose of drafting such arrangement as the Society's funds may permit for the maintenance of the Museum of natural history on the most efficient footing.

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of April, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.			Observations at 4 P. M.							Calculated Humidity.			Register Thermometer extremes.		Rain.	Wind.		Weather.		
	Old Stand. Barometer at 32°.	New Stand. Barometer	Thermometer in air.	Depression of wet-bulb	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Do. by dew-point.	Old Stand. Barometer at 32°.	New Stand. Barometer	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Do. by dew-point.	Cold on roof.	Heat in Sun's rays on roof.		10 A. M.	4 P. M.	Morning.	Afternoon.	Night.
1	29,796	30,[illegible]	5,7	15,5	15,1	53,8	86	40	41	70	29,660	30,[illegible]	11,9	18,9	21,4	57,7	67	29	33	40	73,5	118,2		SW.	SW.	hazy.	cloudy.	storm.
2	,807	[illegible]	4,5	8,0	6,4	67,0	87	63	69	72	,716	[illegible]	14,1	10,9	10,4	66,2	81	56	56	61	64,0	104,5	0,2	w.	E.	dull.	do	do
3	,804	[illegible]	4,4	10,3	8,9	62,0	84	53	59	66	,721	[illegible]	16,9	13,6	12,4	63,8	76	52	46	52	62,5	113,0	0,2	W.	S.	cloudy.	fine.	do
4	,833	[illegible]	2,5	6,7	6,9	66,3	90	70	71	76	,709	[illegible]	21,9	17,3	16,1	53,0	73	41	65	48	68,2	110,0		sw.	sw.	overcast.	nimbi.	do
5	,808	[illegible]	4,7	11,5	10,8	66,0	82	55	57	63	,683	[illegible]	22,7	18,7	20,2	39,8	69	32	35	42	69,8	115,2		S.	sw.	cumult.	cum. str.	
6	,866	[illegible]	5,3	6,3	8,0	69,4	91	67	71	80	,634	[illegible]	22,3	13,9	14,3	62,0	79	50	38	57	75,5	113,1		w.	sw.	cir. cum.	cloudy.	
7	,738	[illegible]	5,9	6,3	8,3	67,7	88	66	56	74	,622	[illegible]	25,7	22,5	27,2	52,7	59	25	25	30	75,4	114,7		w.	SW.	clear.	cumuli.	
8	,760	[illegible]	4,1	7,0	7,0	75,8	89	72	67	76	,630	[illegible]	21,6	9,2	9,5	75,7	84	65	61	66	69,8	115,6		W.	S.	do	haze.	
9	,793	[illegible]	4,3	10,1	10,0	67,2	82	69	59	63	,722	[illegible]	16,7	13,7	13,2	66,0	74	48	52	49	77,4	95,2		S.	n.	cloudy.	stratus,	
10	,814	[illegible]	3,8	10,8	11,0	66,1	79	55	56	57	,682	[illegible]	11,5	17,6	17,5	63,0	70	37	41	44	72,6	115,0		W.	SW.	cir. cum.	cum. cir.	
11	,790	[illegible]	6,4	13,6	14,8	63,8	71	43	48	45	,662	[illegible]	14,8	25,5	25,0	48,0	48	20	22	20	65,6	117,3		sw.	W.	heavy fog,	c.	clear.
12	,792	[illegible]	9,2	12,4	12,9	68,0	76	52	53	52	,650	[illegible]	14,8	24,8	22,4	49,0	48	25	23	20	75,4	126,0		w.	W.	do	do	do
13	,723	[illegible]	5,6	7,0	7,6	71,0	86	70	61	70	,585	[illegible]	17,7	27,0	28,0	53,2	51	19	24	23	72,6	119,1		w.	W.	do	do	hot wind.
14	,700	[illegible]	8,3	11,1	12,2	68,0	76	55	53	52	,552	[illegible]	15,4	22,2	20,3	55,8	55	27	28	26	73,1	126,2		SW.	N.W.	do	do	do
15	,721	[illegible]	1,2	18,9	18,6	62,7	63	34	40	35	,619	[illegible]	18,1	23,1	26,2	55,8	57	21	26	28	73,2	121,0		SW.	w.	do	do	do
16	,771	[illegible]	3,1	12,7	12,2	66,5	72	53	47	46	,620	[illegible]	19,6	28,8	26,5	52,2	48	20	22	20	75,4	128,2		n.	o.	sl. fog.	c. str.	hazy.
17	,722	[illegible]	1,7	13,4	14,2	61,0	74	48	39	49	,564	[illegible]	19,9		24,4	53,0	50	26	22	22	75,0	117,2		w.	w.	clear.	very hot.	
18	,619	[illegible]	4,9	16,9	19,0	61,8	64	35	38	36	,483	[illegible]	10,2	27,8	26,0	55,4	51	24	24	23	75,0	120,0		SW.	sw.	do	do	
19	,572	,556	93,3	12,6	13,7	68,3	76	53	46	52	,444	,396	104,3	32,0	33,5	50,3	44	14	18	17	77,1	123,5		sw.	sw.	do	do	
20	,614	,579	91,9	9,5	9,6	72,0	84	65	54	66	,497	,445	98,4	15,7	14,0	73,0	74	52	45	49	77,6	111,2		se.	S.	do	hazy.	((eclip.
21	,596	,611	89,9	8,7	8,3	73,5	92	67	60	66	,530	,489	95,5	14,0		75,2	76	52	53	52	77,4	102,4		S.	SE.	cloudy.	do	
22	,756	,717	86,7	5,1	5,0	76,0	92	79	71	82	,692	,645	85,0	4,0	4,8	76,3	91	81	76	80	76,5	116,5	0,5	sse.	o.	clear.	lull.	stm.
23	,672	,625	87,6	8,8	9,0	76,2	85	65	71	68	,735	,686	96,4	19,2	21,2	66,0	67	33	39	40	66,5			S.	S.	do	clear.	
24	,911	,866	88,3	7,6	8,0	75,5	86	68	66	70	,755	,709	97,4	17,8	20,2	70,2	67	35	43	46	75,4			sw.	sw.	do	cumuli.	
25	,842	,796	88,3	5,0		76,1	86	80	68	70	,697	,648	98,9	26,1	27,4	66,1	54	20	26	25	76,2			ssw.	ssw.	do	clear.	
26	,820	,784	90,1	12,1	12,4	70,3	78	54	53	56	,697	,644	96,9	26,9	27,7	65,3	56	19	37	27	69,6			sw.	sw.	do	do	
27	,836	,796	91,5	17,0	15,4	68,3	74	42	47	49	,719	,667	95,7	24,0	23,0	61,9	58	25	34	29	74,4			sw.	sw.	do	do	
28	,804	,778	90,0	12,0	12,0	69,5	79	55	52	57	,696	,642	93,5	21,3		58,0	61	28	33	33	76,1			sw.	sw.	do	do	
29	,765	,733	88,3	8,9	10,0	70,0	79	65	56	57	,622	,563	93,9	18,5	18,5	68,9	68	37	45	41	74,8			wsw.	sw.	do	fresh breeze.	
30	,678	,646	88,5	8,7	8,5	75,4	87	66	66	72	,580	,531	91,5	10,3	9,6	74,2	86	61	58	70	76,2			S.	S.	cloudy.	overcast.	
Mean,	29,764	,732	87,4	10,5	10,8	68,6	80	58	56	61	29,639	,587	94,4	19,4	20,4	61,7	64	35	38	39	73,6	116,6	0,9	South west.		unusually hot and dry.		

Difference of Barometers .092 and .052.—The Dew-point observations are sometimes probably below the truth. Rain on March 22nd omitted, 0,4 inches.—There was a slight water-spout on the 22nd. A very destructive one occurred in March at Jessore.

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I.—*Journal of a visit to the Mishmee hills in Assam. By* Wm. Griffith, *M. D. Madras Medical Establishment.*

[In a letter to Captain F. Jenkins, Political Agent, N. E. Frontier; communicated by Government to the Asiatic Society, the 5th April, 1837.]

In pursuance of my intention of visiting the *Mishmee* hills, as soon as the season was sufficiently advanced, I left this station on the 15th October, and proceeded up the *Brahmapútra*, or *Lohit*, to the mouth of the *Karam Pánee*, which we reached on the third day. I thence ascended this river, which is a mere mountain stream, for a similar period, at the expiration of which I had reached its extreme navigable point at that season of the year, even for the small boats which I employed. At *Chonpúra* the rapids of the *Brahmapútra* commence, and thence they increase rapidly in frequency and violence; so much so, that the river is only navigable for small boats one day's journey above the mouth of the *Karam*. No villages exist on the great river, the extreme banks of which are clothed with heavy tree jungle. It is much subdivided by islets formed of accumulations of sand and boulders: these islets being either scantily covered by coarse species of sugar, or tree jungle, or grass and tree jungle. The *Karam* is a considerable stream, consisting of a succession of rapids; its banks are clothed with very heavy tree jungle, among which the *simul**, *údal*†, and a species of alder occupy conspicuous places. On the second day of its ascent we reached the Kamptee village *Palampan*, situated about a mile inland in a southerly direction; it is small and of no consequence, although the Rája is of high rank.

* Bombax heptaphyllum. † Sterculia sp.

At this village my attention was first directed to a very valuable native dye, the *room* of the Assamese; with this dye all the deep blue cloths so much used by the Kamptees and Singphos are prepared. What is more curious, it belongs to a family (*Acanthacea*), the constituents of which are generally devoid of all valuable properties—it is a species of *Ruellia*, and is a plant highly worthy of attention. Leaving the boats, I proceeded up the *Karam*, the general direction of which is about E. S. E., and after a tedious march of five hours over small boulders, reached the first *Mishmee* village on the route. This village is called *Jingsha*, deriving its name, as appears to be always the case, from the Gam: it is about six miles from the foot of the hills—it is small, the number of houses not exceeding ten, and possesses apparently very few khets. The Gam is a man of inferior note. After a halt of two days to enable my people to bring up the provisions, &c., I left for *Brahma-kúnd*, which, from Captain WILCOX's description, I imagined to be the usual route to the interior. *Brahma-kúnd* lies to the E. N. E. of *Jingsha*, from which place it is distant by the path, which is very circuitous, about twelve miles. The route at first follows another bed of the *Karam* to the S. W., thence ascending the *Dat Púnee* to the eastward, thence diverging to the north through a heavy tree jungle, and after traversing this for about an hour ending at the *kúnd*, to which place the descent is steep, but short. Of this celebrated place much has been said, but no description at all answers to it, as it exists now. The scenery is bold, the hills on either side of the river being very steep but of no great height, and the *kúnd*, or reservoir itself is totally lost in the contemplation of the immensely deep bed of the river and the gigantic rocks visible in every direction. The extreme width of the bed of the river is certainly upwards of one hundred yards, but of this only the left half is occupied by the stream. The *kúnd* is contemptible, and unless the attention were especially directed to it, would quite escape observation. The *Deo Púnee* is a paltry attempt at a waterfall. The course of the river is slow and sufficiently tranquil, but to the eastward there is a violent rapid ending about sixty yards from the *kúnd* itself. This reservoir owes its existence to the projection of two rocks into the *Lohit*; at this season it contains but little water. The fuqeer's rock is a huge mass perforated near its summit; its extreme apex is accessible, but with difficulty; it does not represent Gothic spires, this appearance, so far as I know, being limited to shell-limestone. At this romantic spot I staid three days, paying particular attention to the vegetation of the place, which presents some curious features, of which the most

remarkable is the existence of a species of maple and one of rue: the former being an inhabitant of *Nipal*, the latter of considerable elevations on the Khasiya ranges. I was met here by TAPAN GAM, the chief of the *kánd*, who claims all the offerings invariably made to the deity by every native visitor of whatever rank or religion he may be.

After examining the adjoining hills, over which the route pursued by Lieutenant WILCOX lay, I was convinced of the impracticability of proceeding, at least with the usual description of Assamese coolies: I was therefore compelled to retrace my steps to *Jingsha*, having previously arranged with TAPAN GAM for guides to shew me the usual route. At *Jingsha* I was delayed for several days in bringing up rice, which had been kindly forwarded from *Sadiyá* by Lieutenant MILLAR, and without which I knew it would be impossible to visit the interior. From *Jingsha* I proceeded up the *Karam* in an easterly direction, diverging thence up the *Kussing Pánee* in a N. E. direction, thence skirting the foot of the hills, through remarkably heavy bamboo jungle. After a long march we descended a low hill to the *Lai Pánee*, but at a higher point than any previously visited. The following day I commenced the ascent, passing during the day a small Mishmee village without a name, and halting on the slope of a hill in heavy tree jungle. Commencing our march early next morning, we ascended and descended several considerable hills, and at noon reached *Deeling*, the *Dilling* of Captain WILCOX. This is a small village consisting of a few houses, scattered in various directions, and opposite to it on the great mountain *Thumathaya* is another called *Yeu*: there is about this place a good deal of cultivation. It was here that I came upon the route previously followed by Captain WILCOX. This I followed as far as GHALOOM'S: it is correctly described in that officer's memoir on *Assam* and the neighbouring countries. Our halts were as follows:—on the third day the bed of the *Lohit*; on the fourth at the mouth of the *Lung*; on the fifth at GHALOOM'S, whose village has been removed to the banks of the *Lohit*, and at a distance of about one hour's march in advance from the old site. From GHALOOM'S I proceeded to KHOSHA'S, whose village is on the north bank of the *Lohit*. I crossed the river, which is here about forty yards wide, and as usual deep and tolerably rapid, on a bamboo raft, no one but the Mishmees venturing by the suspension canes, which are here stretched over a space of about eighty yards, and at a formidable height from the stream. From KHOSHA'S I proceeded to PRIMSONG'S, whose village is at a much higher elevation than any of the others: but PRIMSONG was unfortunately absent. This was the extreme point to which I was enabled

to proceed, and after waiting three days for the arrival of the chief, I returned to KHOSHA's, where I met with PRIMSONG, who had just returned from a visit to TRUSONG, a chief whose village is far in the interior.

I had thus become acquainted with all the influential chiefs near our frontier, and by all I was received in a friendly and hospitable manner. In accordance with my original intentions, my attention was in the first place directed towards ascertaining whether the tea exists in this direction or not, and, as I have already informed you, I have every reason to think that the plant is unknown on these hills. From what I have seen of the tea on the plains, I am disposed to believe that the comparative want of soil, due to the great inclination of all the eminences, is an insuperable objection to its existence.

As I before observed to you, during my stay at *Jingsha* my curiosity had been excited by reports of an incursion of a considerable force of Lamas into the Mishmee country. It hence became, having once established a footing in the country, a matter of paramount importance to proceed farther into the interior, and, if possible, to effect a junction with these highly interesting people; but all my attempts to gain this point proved completely futile; no bribes, no promises would induce any of the chiefs to give me guides, even to the first Mishmee village belonging to the Meyhoo tribe. I was hence compelled to content myself for the present, with obtaining as much information as possible relative to the above report, and I at length succeeded in gaining the following certainly rather meagre account.

The quarrel, as usual, originated about a marriage settlement between two chiefs of the Meyhoo and Taeen tribes: it soon ended in both parties coming to blows. The Meyhoo chief, ROOLING, to enable him at once to overpower his enemies, and to strike at once at the root of their power, called in the assistance of the Lamas. From this country a force of seventy men armed with matchlocks made an invasion, and, as was to be expected, the Taeen Mishmees were beaten at every point and lost about twenty men. The affair seem to have come to a close about September last, when the Lamas returned to their own country. Where it occurred I could gain no precise information, but it must have been several days' journey in advance of the villages I visited.

It was owing to the unsettled state of the country, resulting from this feud, that I could gain no guides from the Digaroos, without whose assistance in this most difficult country, I need scarcely say, that all attempts to advance would have been made in vain. These people very plausibly said, if we give you guides, who is to protect us

from the vengeance of the Meyhoos when you are gone, and who is to insure us from a second invasion of the Lamas?' Another thing to be considered is the influence even then exercised over the Mishmees near our boundaries by the Singphos connected with the Dupha Gam; but from the renewal of the intercourse with our frontier station, there is every reason for believing that this influence is ere this nearly destroyed.

I was, after various attempts, reluctantly obliged to give up the affair, although I am by no means certain that, had I known of the delay that would take place before I met Captain HANNAY, a longer sojourn in the hills would not have been attended with success. I returned by the same route, halting at *Deeling* to enable me to ascend the great mountain *Thumathaya*, on the top of which I passed one night, and the ascent of which in every respect amply repaid me for all difficulties incurred. On my return I visited TAPAN GAM's* village, where I met several Singphos, who were engaged in the late troubles on the side of the Dupha, and which is reported to be the favorite haunts of a famous Singpho dacoit, CHU'N YU'NG; thence I returned to *Jingsha*.

Nature of the country. The country traversed during the above journey consisted of a series of ascents and descents, as must always evidently be the case where the route follows the course of a considerable river; for difficulty it cannot well be surpassed, this again depending on the proximity of the route to the *Lohit*. The only comparatively easy portion is that between *Daí Pânee* and the place where we descended to the bed of the large river. The hills are invariably characterised by excessive steepness, and as the greater portion of the route winds round these eminences at some height above their bases, the marching is excessively fatiguing and difficult, to say nothing of its danger. In very many places a false step would be attended with fatal consequences; in one place in particular, upwards of an hour was consumed in traversing a sheer precipice at a height of at least one hundred feet above the foaming bed of the *Lohit*; the only support being derived from the roots and stumps of trees and shrubs, and the angular nature of the face of the rock, which is, I believe, grey carbonate of lime.

Paths. The paths are of the very worst imaginable description, always excessively narrow and overgrown by jungles in all directions. In very steep places the descent is assisted by hanging canes, which afford good support. No attempt is ever made at clearing them of

* This chief is not worthy of any encouragement. He would feel this the more, owing to the proximity of his village to our boundary and its easiness of access.

any obstruction: indeed the natives seem to think that the more difficult the paths the better, a greater security being thus obtained from foreign invasion. Better paths do exist, and there is one in particular on the north of the *Lohit*, which is that commonly used by the Mishmees when carrying cattle back from the plains to their homes. But it was my fortune to be shown the very worst, although I escaped the cliff above alluded to by following on my return another but very circuitous route. Up to GHALOOM'S old site the hills are nearly entirely clothed with dense tree jungle, the points of some being covered with a coarse grass; thence every step towards the eastward is accompanied by a most material improvement, the hills presenting a very pleasing and varied surface, and being only clothed with tree jungle towards their bases. The extreme summits of the loftiest are naked and rugged.

Rivers and Torrents. The torrents which are passed between the foot of the hills and GHALOOM'S are the *Tussoo* (*Dissú* of WILCOX), which separates *Thumathaya* from *Deeling*, the *Lung* and the *O*. Of these the *Lung* is the only one not fordable; the Mishmees cross it by suspension canes. I preferred constructing a rude bridge, which, as the torrent is divided by huge boulders, was neither a difficult nor a very tedious affair. The *Tid-ding*, which is of considerable size, is on the right bank of the river. The rills are frequent, especially towards the foot of the hills. I saw only one waterfall of any magnitude near the *Tussoo*: the body of water is not great, but the height of the fall is certainly one hundred feet. The *Lohit* itself beyond the *Lung* is of no great size, the average breadth of the stream at that season being from forty to fifty yards. At GHALOOM'S its depth did not appear to exceed thirty feet. It is a curious fact, its temperature is lower than that of any of its tributaries. Although I have not seen the *Dibong*, judging from the comparatively small size of the *Lohit*, the probability is much in favor of the former carrying off the waters of the *Tsan-poo*.—PRIMSONG indeed informed me that the *Lohit* above the *Ghaloom Pánee* (*Ghaloom Thee* of WILCOX) is an insignificant mountain stream.

Altitude of Mountains. Of the height of the various ridges surmounted I can give no idea: the only thermometer I had was unfortunately broken before my arrival at the *kúnd*. The highest I visited was *Lamplang-thaya*; the next in height *Thumathaya*: on both these snow occasionally collects during the cold months. The western face of the latter is completely bare towards its summit, the eastern being covered with tree jungle. Of the former, the upper third is completely naked; and two efforts to complete its ascent were fruitless.

Geology. Of the geology of these hills I am unfortunately incompetent to judge; nor was I ever enabled to make a satisfactory collection, owing to the impossibility of procuring additional carriage.

Zoology. The subjects presented by the animal kingdom are certainly not extensive either in number of species or of individuals. I observed no wild quadrupeds except monkeys and an occasional squirrel; no tigers exist, but bears are represented as tolerably numerous. The number of birds which I succeeded in procuring barely amounted to species.

Botany. Of the botany it is not my intention here to give an extended account. It is sufficient to state that it appears to have similar features with other portions of the *Sub-Himálayan* ranges. I did not reach the region of fir trees, but I could plainly distinguish by the telescope the existence of very extensive forests on the loftier ranges to the eastward. The families that have the most numerous representatives are *Compositæ, Urticeæ, Balsamineæ, Cyathandiaceæ, Acanthaceæ, Gramineæ* and *Filices*. The most interesting, chiefly from the indicating elevation, or from their being usually associated with climates similar to that of northern Europe, are *Ranunculaceæ*, including that valuable drug the *Mishmee-Teeta*, and the celebrated poison *Bee. Fumareaceæ, Violaciæ, Camelliaceæ, Hamamelidiæ*, including the *Bucklandia* and *Sedgwickia, Gentianeæ, Vacciniaceæ, Campanulaceæ, Thymaleæ, Juglandeæ, Cupuliferæ*. The most unique plants is a new genus of *Raffleseacea*, like its gigantic neighbour of the Malayan Archipelago, a *parasite*, on the root of a species of vine.

The natives of this portion of the range are divided into two tribes, Taeen or Digaroo and Meyhoo, these last tracing their descent from the *Dibong* Mishmees who are always known by the term crop-haired. The Meyhoo, however, like the Taeens, preserve their hair, wearing it generally tied in a knot on the crown of their head. The appearance of both tribes is the same, but the language of the Meyhoos is very distinct. They are perhaps the more powerful of the two; but their most influential chiefs reside at a considerable distance from the lower ranges. The only Meyhoos I met with are those at *Deeling, Yeu*, a small village opposite *Deeling* but at a much higher elevation, and *Tupan*. I need scarcely add that it was owing to the opposition of this tribe that Captain Wilcox failed in reaching *Lama*. The Digaroos are ruled by three influential chiefs, who are brothers, Drisong, Khosha, and Ghaloom: of these, Drisong is the eldest and the most powerful, but he resides far in the interior. Primsong is from a distant stock; and as the three brothers mentioned above are

all passed the prime of life, there is but little doubt that he will soon become by far the most influential chief of his tribe. Both tribes appear to intermarry. The Mishmees are a small, active, hardy race, with the Tartar cast of features; they are excessively dirty, and have not the reputation of being honest, although, so far as I know, they are belied in this respect. Like other hill people, they are famous for the muscular development of their legs:—in this last point the women have generally the inferiority. They have no written language;—their clothing is inferior; it is, however, made of cotton, and is of their own manufacture;—that of the men consists of a mere jacket and an apology for a *dhotí*,—that of the women is more copious, and at any rate quite decent: they are very fond of ornaments, especially beads, the quantities of which they wear is very often quite astonishing. They appear to me certainly superior to the A'bors, of whom, however, I have seen but few. Both sexes drink liquor, but they did not seem to me to be so addicted to it as is generally the case with hill tribes:—their usual drink is a fermented liquor made from rice called *monih*; this, however, is far inferior to that of the Singphos, which is really a pleasant drink.

Religion. Of their religion I could get no satisfactory information:—every thing is ascribed to supernatural agency. Their invocations to their deity are frequent, and seem generally to be made with the view of filling their own stomachs with animal food. They live in a very promiscuous manner, one hundred being occasionally accommodated in a single house. Their laws appear to be simple,—all grave crimes being judged by an assembly of Gams, who are on such occasions summoned from considerable distances. All crimes, including murder, are punished by fines; but if the amount is not forthcoming, the offender is cut up by the company assembled. But the crime of adultery, provided it be committed against the consent of the husband, is punished by death; and this severity may perhaps be necessary if we take into account the way in which they live.

The men always go armed with knives, Lama swords, or Singpho *dhaos* and lances; and most of them carry cross-bows—the arrows for these are short, made of bamboo, and on all serious occasions are invariably poisoned with *bee*. When on fighting expeditions, they use shields, made of leather, which are covered towards the centre with the quills of the porcupine. Their lances are made use only for thrusting: the shafts are made either from the wood of the lawn *(Caryota ureas)* or that of another species of palma *juce*—they are tipped with an iron spike, and are of great use in the ascent of hills.

The lance heads are of their own manufacture and of very soft iron. They have latterly become acquainted with fire-arms, and the chiefs have mostly each a firelock of *Lama* construction.

Their implements of husbandry are very few and rude. They have no metal utensils of their own manufacture,—all their cooking being carried on in square capacious stone vessels, which answer their purpose very well. The population is certainly scanty, and may be estimated as follows:—

Jingsha,	50
Tapan,	80
Deeling and Yeu,	80
Ghalooms,	80
Khasha,	100
Primsong,	70
	460

This must be considered as a rough estimate, and probably is considerably exaggerated.

The number of villages among which the above population is distributed is seven, but it must be remembered that there are two other villages, namely, *Meerisno* and *Rulings*, close to the *Khashas*. By far the greater number of villages appear to be located near the banks of the *Lohit*; I saw only one situated on the *Leeng*; while on the summits of *Thumathaya*, the villages *Jingsha*, *Tapan*, *Deeling* and *Yeu* consist of several houses, none, however, exceeding ten in number; and GHALOOM'S, KHASHA'S and PRIMSONG'S consist each of a single house. The houses in the former case resemble a good deal those of the Singphos, and are of variable size; in the latter case the house is of enormous length, this depending on the rank of the possessor, and capable of accommodating from eighty to one hundred and sixty persons,—all are built on *machauns*, constructed almost entirely with bamboo, divided into compartments and thatched with the leaf of a marontaceous plant (arrow-root family) likewise found in *Assam*; this being again covered, at least in some instances, with the leaves of a species of ratan. The leaf of the former answers its purpose admirably both as to neatness and durability, and forms an excellent protection against the rain. KHASHA'S house is certainly one hundred and sixty feet in length; it is divided into twenty apartments, all of which open into a passage: generally it would appear on the right side of the house as one enters, along which the skulls and jawbones of the various cattle killed during the possessor's life time are arranged. In each apartment there is a square fire-place, consisting merely of earth,

about which the bamboos are cut away. As no exit for the smoke is allowed, the air of the interior is dense and oppressive, and often exceedingly painful to the eyes.

Domestic animals. Their live-stock consist chiefly of hogs, *mathoons*, a noble animal intermediate between the bull and buffalo, and fowls. Of these the hogs are the most common—they are easily procurable; but they are not at all disposed to part with the fowls, which they say is the favorite food of the deity. I was hence frequently reduced to eat pork, which seemed to me, no doubt, on account of its vile feeding, very unwholesome. On my arrival at each village a hog was killed as a matter of course, of which a portion was presented to me, and a portion to my people. In one case only a young mathoon was killed; in all these cases, the flesh is immediately cut up and devoured as soon as possible. Their cooking is very rude, chiefly consisting of minces. Chowrie-tailed cows are only to be met with farther in the interior.

Their dogs are of the ordinary pariah kind. Cats are uncommon.

Among the skulls ranged in their houses, those of several other kinds of cattle occur, including the cows of the plains, and the buffalo; the remainder are procured entirely from *Lama*.

Cultivation. Their cultivation is scanty, apparently not sufficient to supply even their wants, and carried on in a very rude way. The most favorable places are of course selected, either on the slopes of the hills or on the occasionally more level patches, and joining the *Lohit*. The soil in almost all cases consists of a thin superstratum of vegetable mould. Some of the villages are in possession of a good sort of hill rice, but the chief cultivation is of *bobasá**, *goomdan*† or Indian corn, *khonee*‡ and two or three still inferior grains. The villages situated at low elevations produce excellent yams and *aloos* of several kinds. They are unacquainted with wheat, barley, &c.; nor have they even taken the trouble to obtain potatoes. The capability of the country up to the point to which I searched, is not great, but thence the landscape is at once sufficient to convince one that the improvement is rapid as one proceeds to the eastward.

Of *kanee* a small quantity is cultivated, chiefly however for sale to the Singphos, although many of the natives are great opium eaters. They cultivate a sufficient quantity of cotton for the manufacture of their own clothing, but it seems to be of inferior quality. Tobacco is in great request, still it does not seem to be regularly cultivated. Both sexes, young and old, are determined smokers; their pipes are

* Elentine caracana. † Tea woys ‡ Davaea sp.

chiefly of Singpho manufacture; the poor classes contenting themselves with those made from bamboo.

Granaries. I should have mentioned that the produce of their fields is kept in small granaries, at some distance from their houses: and it is a regulation calculated to prevent quarrels, that each wife, (for they tolerate polygamy,) has her distinct granary. Their bridges have been well described by Captain Wilcox;—the passage of that at Ghaloom's which is full seventy yards in length, occupying from two to two and half minutes The articles in the greatest request among them are salt, woollen clothing, printed cottons, and glass beads of various colors. Of the existence of salt, within their own boundaries they are unaware: generally they have none. Occasionally they procure Lama rock-salt, which is (in bulk) of a reddish color, from being mixed up with a red earthy substance somewhat aromatic. For these they exchange cloths of their own making, and their three staple articles, *mishmee-teeta*, *bee*, and *geitheoon*, which are, in fact, at present the only valuable known products of the country.

With *Lama* they carry on an annual trade, which apparently takes place on the borders of either country. In this case *mishmee-teeta*, is the staple article of the Mishmees, and for it they obtain *dhaos* or straight long swords of excellent metal and often of great length; copper pots of strong, but rough make, flints and steel, or rather steel alone, which are really very neat and good; warm woollen caps, coarse loose parti-colored woollen cloths, huge glass beads, generally white or blue, various kind of cattle, in which *Lama* is represented as abounding, and salts. I cannot say whether the Lamas furnish flints with the steel implements for striking light; the stone generally used for this purpose by the Mishmees is the nodular production from *Thumathaya*,—and this, although rather frangible, answers its purpose very well; with the Singphos they barter elephant's teeth, these animals being found in the lower ranges, for slaves, dhaws, and buffaloes.

With the Khamtees they appear to have little trade, although there is a route to the proper country of this people along the *Ghaloom Púnee*, or *Ghaloom Thee* of Wilcox's chart; this route is, from the great height of the hills to be crossed, only available during the hot months.

With the inhabitants of the plains they carry on an annual trade, which is now renewed after an interruption of two years, exchanging cloths, Lama swords, spears, *mishmee-teeta*, *bee*, which is in very great request, and *gertheana* much esteemed by the natives for its peculiar and rather pleasant smell, for money (to which they begin to

attach great value), cloths, salt and beads: when a sufficient sum of money is procured, they lay it out in buffaloes and the country cattle.

Political relations. With reference to their political relations they were all—at least all those near our frontier—active supporters of the Dupha Gam, to whom they rendered very effectual assistance in the erection of stockades, although they declined fighting. Formerly the Rája of *Assam* exercised almost exclusive control over them, entirely, as it appears, from making their most influential chiefs trifling annual presents of one or two buffaloes. With our government their intercourse has, as I before mentioned, been entirely interrupted during the last two years; at present, however, they appear inclined to pay all proper respect to the Assamese authorities. From the active assistance they rendered Dupha Gam, and in the second instance to put an impediment in the way of the trade of slaves, it is obviously of importance to keep them in this friendly state, and this would be best done by adopting the plan followed during the times of the Rájas of this portion of *Assam*; and with this view I would beg to direct your attention to GHALOOM, KHOSHA, and PRIMSONG: of these three, KHOSHA is perhaps possessed of the greatest influence, but he is getting old and inactive. The same may be said of GHALOOM, his younger brother. The most active, ambitious, and enterprising man is certainly PRIMSONG, who is still young; and as he evidently looks up to the possession of the chief authority among the Gams, any favor shewn to him would render him a steady friend. He is the only chief I saw who is in the habit of visiting *Lama*. It was from materials given by him that Captain WILCOX drew up that portion of his map which has reference to the course of the *Lohit*, and it is through him alone that we may look forward to becoming acquainted with the country of the Lamas. He is, in fact, far superior to all the rest in talents and information, and, as a proof of his activity, he has just returned from the *Hookum* territory, where he saw Captain HANNAY, and whither he had no doubt followed the Dupha Gam. So long indeed as the Mishmees are in relation with the Singphos, so long will there be a ready way in which to dispose of slaves by the Singphos, a people on whom no dependence is to be placed. At the period of my visit to KHASHA, I saw a slave who had been actually sold by Singphos residing within our territory, within the last six months. With the *Dibong* Mishmees they are, and always have been, engaged in a war of extermination. Of this tribe, both Mooghoos and Digaroos entertain the greatest fear: their inroads have caused the latter tribes to forsake their haunts on the *Digaroo* mountains, and I am told that

at this time none are to be found to the westward of the *Tid-ding*. With the Lamas, as I have before observed, they are at present at rupture; and protection might be promised them against the inroads of either people, such protection being chiefly limited to the loan of old muskets and ammunition. It is chiefly owing to their proximity to the Lamas, that the country of the Mishmees, as being the most feasible route thither in this direction, is worthy of attention. It is obvious from all accounts that the Lamas are a very superior race, and that they greatly resemble the Chinese. It would hence be highly desirable to open a trade between *Upper Assam* and *Lama*, and to this I really see no insurmountable objection. The great object to be first attained is personal communication with these people, and I have every reason to believe that through the influence and aid of PRIMSONG, who is well acquainted with them, that I should be able to accomplish this. On this subject, however, I have already addressed you officially.—PRIMSONG, in the event of the non-consent of the other chiefs, has promised to take the responsibility on himself, and as the route he has promised to take me leads across the termination of the *Himálayas*, and ends in some distance from the southern extremity of the valley, in which the inhabitants of this portion of *Lama* reside, he could necessarily act independently of them; almost all the Meyhoo chiefs, from whom the chief opposition is to be apprehended, being located along the *Lohit* to the westward of the junction of the *Ghaloom Pánee*. Having once gained access to the valley, a return could be effected along the banks of the *Lohit*, so as to materially increase our knowledge of that river. From my knowledge of the Mishmees I am confident that the slightest care would ensure me from any attempts at treachery. Open hostilities they would never attempt, and as there would be no crossing of any considerable river, no attempts could be made, as they, the Meyhoos, appear to have intended in Captain WILCOX's instance, on the party when subdivided. The hasty retreat of this officer has been attended with unfortunate results in increasing the fear which the Digaroos entertain for the Meyhoos.

With reference to my making the attempt, I can only say that sixty maunds of rice are already lodged within the hills, and my orders are only necessary to cause its transportation to the villages of KHOSHA, GHALOOM, and PRIMSONG. Thus one great obstacle in all hill expeditions is already removed. PRIMSONG has engaged to provide me with men for the transports of my carriage and the necessary presents; thus I shall run but little risk from detention owing to the sickness or laziness of coolies. In short, the only thing likely to interrupt my

progress will be sickness; but having once reached PRIMSONG's, safety would be perhaps insured. I speak here in allusion to the season, the route being, from the great height of the mountains to be crossed, only practicable during the rains. I shall close this portion of my letter with a few remarks on the Lamas, for which I am indebted to PRIMSONG. He describes them as resembling the Chinese, whose peculiar manner of wearing their hair they adopt; the country is very populous, the houses well built, and the people are well supplied with grain, the staple one being rice. They are of a large stature, well clothed, wearing Chinese trousers and shoes, navigating their rivers by means of boats, and using horses, of which they possess three varieties, as beasts of burthen. They possess in addition, no less than seven kinds of cattle. They distil ardent spirits, and their manufactures, which are numerous, are said to be very superior.

On my arrival at *Jingsha*, I determined on crossing the country towards *Beesa*, having heard that tea existed in this direction. Leaving *Jingsha*, I proceeded up the *Karan* to the east, thence diverging to the south along the now nearly dry bed of the *Kamptee*. During the march I passed one small Singpho village, and in the evening arrived at *Onsa*, the largest Singpho village I ever saw. On the following day I left for *Suttoon*, and after a march of three hours halted beyond *Suttoon* close to the head of the *Tenga Pánee*. From this, on the following day, I proceeded crossing the *Tenga Pánee*, the course of which I followed for some distance, thence diverging to the S. W. towards the *Minaboom* range through excessively heavy bamboo jungle. On reaching the *Muttock Pánee* I ascended its dry bed for some distance until we reached the hills. This range, along which I proceeded some distance, is entirely sandstone, and in no part exceeds five hundred feet in height; thence descended and arrived at the *Meerep Pánee*, in the bed of which we halted. The next day carried me after a long march to *Beesa*, the course first laying down the *Meerep Pánee*, thence to the westward and through a very low and uninteresting and nearly uninhabited country. We emerged from the jungle about a mile and a half above *Beesa*, to which place our course lay along the nearly dry bed of the formerly larger now small *Dihing*. This river, which up to last year drained a great portion of the Singpho country on this side of the *Patkaye* range, is now nearly dry, its waters having taken a new course into the *Kamroop*, and thence into the *Booree Dihing*. It is now only navigable for small boats as far as the Degaloo Goham's village, which is but a short distance from its mouth.

The valley occupied by the *Khakoo* Singphos, which I had thus crossed, is bounded to the N. E. by the *Mishmee* mountains, and to the S W. by the *Mim'oom* range; it is of a triangular form, and not of any great extent: it is drained by the *Tenga Pánee*. The whole valley is comparatively high, and may be considered as a low table land: it is incomparably the finest part of our territory inhabited by Singphos, that I have yet seen: between *Itusa* and *Lattora*, I passed, although it was a short march, five large villages; and whatever the case may be with the other portions of our Singpho territory, this valley is very populous and highly flourishing. *Luttora* is a village of no great size: formerly Luttora Gam was the chief of the whole valley, but his followers, since the affair of the Dupha Gam, have divided themselves between Itusa and Ittanshantan Gams who are friendly to our Government.

From Itusa Gam I met great attention; from Luttora Gam, until lately an avowed enemy to our Government, I received a visit, being the first he ever paid to any officer. He made the usual professions of submission; but on my telling him that he should send in his submission to the officers at *Sadiyá*, he replied very quietly, that he must first communicate with the Dupha Gam. (Latterly I understand that he has sent his submission in to the Political Agent.) He was attended with a considerable number of men armed with lances and *dhaos*. He is a large, ruffianly-looking man, nearly blind, and for a Singpho very dirty. He was attended with an adherent of the Dupha Gam, who had just returned from *Hookum*. This man descanted on the general satisfaction given to the chiefs about *Hookum* by the presents of Captain HANNAY, and he said that all the chiefs had agreed to bury the remembrance of all former feuds in oblivion.

The chief cultivation of the valley is that of *ahoo dhan*, the fields of which are numerous and extensive.

The manners of the Khakhoos are the same as those of the other Singphos; they are represented, however, as excelling these in treachery and cruelty. I met with no opposition on the journey, although I was attended by only sixteen Donaniers; and although, as I have since ascertained, my adoption of this route caused great offence to the chiefs, one of whom sent a letter of remonstrance to the officers at *Sadiyá*. They have a great number of Assamese slaves, and there is but little doubt that the practice of slave-selling still exists among them. In fact a Donanier from *Chykwas* was actually obliged to place himself under my protection. None of the villages are stockaded. *Luttora* is on a strong site, being built on a steep eminence nearly surrounded by two

small streams; and as the ascent is steep, although not great, it is difficult of access, and might be well defended.

I gained no clue to the actual existence of the tea, although the yellow soil was not unfrequent towards the head of the *Tenga Pánee*. The *Minaboom* range, as I have above observed, is of no considerable height; it is covered with tree jungle, among which occurs a species of *dammai*, *amagnolea*, and one or two species of oak.

On arriving at *Beesa* I heard that Mr. BRUCE was at *Fingree*, and as that gentleman had previously expressed a wish that I should give my opinion on his mode of tea culture, I immediately determined on proceeding thither: with this view I left for *Rapoo*, which I reached in two ordinary marches. There visited the tea, and then left for *Rapoodoo*. Here also I visited the tea, which is abundant, appearing to me the best of that produced in the Singpho territory;—the soil is precisely the same, in all its external characters, as that of the other tea localities.

The tea plant being certainly adapted to some degree of shade, the free exposure to the sun seems wrong in principle, evidently producing a degree of coarseness in the leaves, totally incompatible, I presume, with the production of fine flavored teas.

From this place I proceeded through heavy jungle, uninhabited except by elephants, for two days, literally cutting my way where the tracks of the elephants were not available owing to their direction. Our course being determined by that of the *Dibora*, on the evening of the second day we arrived at *Choakree Ting* in the *Muttock* country, and halted on the *Rolea Pánee*. The third day, after a very long march of nearly twenty miles, carried me close to *Ranga gurrah*. On reaching this I found that Major WHITE was expected daily, but that Mr. BRUCE had already returned to *Sadiyá*.

I had the pleasure of accompanying Major WHITE three days after my arrival to *Tingree*, from which place we returned direct to *Sadiyá*, the march occupying three days.

The greater part of *Muttock* which I had thus an opportunity of seeing may be characterised as capable of producing tea, the soil being in almost every instance of that yellow color, hitherto found to be so characteristic of the tea localities. To this the only exceptions exist in the swampy ravines, which are occasionally of great extent. The better portions consist of rather high plains, covered with tall coarse grasses, and intersected here and there with narrow strips of jungle. It may be considered as a comparatively open country;—the villages are numerous, and the people satisfied. Altogether *Muttock*

may be considered as a well-governed flourishing district. But on this point I need not detain you, as the nature of the district is sufficiently well known.

The villages passed between *Beesa* and *Muttock* are few; the first is a small temporary village occupied by Nagas, about ten miles from *Beesa*. The next is *Dhompoan*, a large Singpho village, half way between the Naga village, and *Rapoo*, *Rusoo*; and, lastly, *Rupádoo*. Between this and *Choakrí Ting* no villages occur.

II.—*Corrected Estimate of the risk of life to Civil Servants of the Bengal Presidency. By* H. T. PRINSEP, *Esq. Sec. to Govt. &c.*

In the number of this Journal for July, 1832, some Tables were published showing the risk of life amongst Civil Servants on the Bengal Establishment, and in a short article the principles were explained upon which the tables had been framed. The method adopted in that article for computing the risks of life in the Civil Service of the Bengal Presidency has met the entire approbation of the most able actuaries in England, and the tables have not only been adopted as affording the best estimate forthcoming of the chances of life amongst persons in good circumstances in the climate of India, but attempts have likewise been made to apply the same method of computation to other services. Amongst others, Mr. CURNIN has, we understand, successfully computed tables framed on the same principles for the Military Services of all the three Presidencies of India, from the year 1765 to the present date,—a work of immense labour, the results of which we have seen in abstract, and lament that the publication of them has been so long delayed. As our Civil Service tables have thus acquired an importance, as well from the use made of them by insurance offices, as from the application of the principle to the construction of other tables, we have deemed it necessary, now that another lustrum of five years has passed since they were framed, to republish them, completed to the close of 1836, and to draw attention a second time to the method adopted in their construction. We will not conceal that a principal motive with us for taking this trouble is that we have discovered some errors in the Tables of 1832, and therefore are anxious to supercede it for practical use by supplying one more accurate. We are glad also to avail ourselves of the opportunity to point the attention of public officers and persons of intelligence at other Presidencies to the expediency of keeping registers and framing similar tables for the different services with which they may be con-

nected. In a very valuable paper drawn up by Mr. GRIFFITH DAVIES for the Bombay Civil Fund, a form of register is given, which, if duly kept, will afford the means of constructing accurate tables for any purposes framed precisely upon our principle, and this table may be adopted for a regiment or for any number of persons circumstanced alike—that is, when in a condition to yield a fair average of casualties, just as well as for a service constituted like the Civil Services of the different Presidencies. The only thing to be attended to is, that in like manner as a separate page in the service registers ought to be set apart for the nominations of Civil Servants for each year, because, for facility of computation, we assume them to be of persons of the same average age, so a separate page must be assigned to persons of the same age when the register is formed for the purpose of obtaining the risks of life amongst persons promiscuously selected, and not of uniform or nearly corresponding ages.

As it is of importance that this should be well understood, and because we wish to inculcate the expediency of framing tables of the same kind not only for his Majesty's and for the Native regiments, but likewise for the natives of cities and towns in different parts of India, we shall devote a few words to a little further explanation of the registers we recommend to be kept. The following is the form into which any number of names upon which it is desired to obtain life results of any kind may be entered, taking care only, as before pointed out, that those entered in the same page are always of the same age at the time of first registry.

Page 14.

Age 23.	1st year.	2nd.	3rd.	4th.	5th.	6th.	7th.	8th.	9th.	10th.	&c.
A. ..	1	1	1	1	1	1*					
B. ..	1	1	1	1	1	½ died.					
C. ..	1	1	1	1	1 mar.	1	1 one son.	1	1	1	
D. ..	1	1	½ died.								
	4	4	3½	3	3	2½	1	1	1	1	
Page 16. Age 25.											
E. ..	1	1	½ died.								
F. ..	1	1	1	1	½†						
G. ..	1	1	1	1	1	1	1	1	1	1	
H. ..	1	1	1	1	1	1	1	1	1	1	
	4	4	3½	3	2½	2	2	2	2	2	

Now if one hundred names of soldiers were entered in the first column as having come into the country at the age of 23, though every one of them came, perhaps in a different year, still the register for as many years as it may extend in respect to these persons,

* Discharged. † Returned to England.

giving in each the fact of the individual having outlived that year or not, or any other circumstance or event, must afford the means of computing the different accidents of life for every age that may be reached by the persons so registered, and the results of one page may be combined with those of any other by adding the sum at the bottom of the page to the proper column with reference to age of such other page, and by taking out of the whole the number of deaths or of marriages or of the births of children, male or female, or of any other accident of life that may be recorded in the column to compare with the sum of the lives of the age in both pages or of as many pages as may be brought into the computation.

We presume that every insurance office keeps registers framed upon this principle, but we wish to see them extended to the Army and likewise to some thousands of natives in towns and in the interior, with a view to obtaining the materials for computing the risks and accidents of life amongst these classes at different ages, in respect to which we are at present without any materials for framing a table or estimate of any kind.

The tables given in Captain HENDERSON's article upon the subject of the value of life in India, published in the last volume of the Researches of the Asiatic Society, though framed with great labour, are defective in this point*. They afford general averages of the value of life amongst certain classes, but not of the value of life at each year of age, which is a most essential circumstance; and for insurance offices or for institutions which deal in annuities, the risks with reference to age are the main and most important, if not the only, matter for consideration.

It is to be observed that it will not be possible to frame registers retrospectively for any class of persons, unless from peculiar circumstances a given number of names with the age of each individual can be entered for any specific past date, and these can be followed out in all their circumstances to the date of the formation of the registers. This is the principle upon which the previous and present tables have been framed for the Bengal Civil Service, and upon which similar tables have been made for the Army. The nominations of each year to the different services being fixed and known, and the

* Capt. DEHAVILAND's tables for the Madras army are an exception to this remark, as they are framed by years of service on our principle, but the results of the first years of the series give ratios of deaths for those years which cast a doubt on the accuracy of the whole table. Mr. GORDON's army table is of too old a date to be useful.

power existing of tracing almost every nominee, the registers have been made up for past years as completely and accurately as if the nominees of the present year were to be followed prospectively through their career of service to the time of their deaths or retirements. The same principle may perhaps be adopted in framing regimental registers retrospectively for privates and non-commissioned officers, because each individual can similarly be traced, and his age at the time of enlistment or of arrival in India will be on the regimental rolls; but no materials will be any where forthcoming from which to do the same for any class of natives, unless it be for the tenants of the different jails during the period of their confinement for debt or under criminal sentences.

Having premised the above remarks on the general applicability of the method of computation adopted for ascertainment of the risks of life amongst Bengal Civil Servants, it remains to give the amended table, framed from the registers prepared in the Secretary's office at Calcutta for the Bengal Service from 1790 to 1836. The number of individuals of the class whose names are registered, and who have given to our table a first year of life, is now very nearly 1000*, and the average of the first five years is consequently framed on a total of 4525 lives. To the end of the 20th year the number of annual lives now exceeds 300, and the five years' averages are upon numbers exceeding two thousand; the yearly numbers diminish to 100 at the end of the 30th year, only affording for the five years' average of that period of life as many as 660 lives. For the succeeding five years the average is reduced to actual casualties upon 299 lives, and after that the numbers are too small to afford any data that can be relied upon.

To the corrected estimate now given of the risks of life in the Bengal Civil Service, we have added a column for retirements, in order that the curious in Europe may build ingenious speculations thereupon. It is mortifying to observe that the total number of these

* The registered nominations are 1003, but this includes the nominees of 1836 who have not yet given us a first year of life. The following test of the accuracy of our table may be satisfactory.

Nominees from 1790 to 31st Dec. 1836, ...		1003
Deaths of table, ...	335	
Deaths in year of nomination, not included in the table,..	8	
Retirements as in table,.....	177	520
Remains on the Civil List 1st January, 1837, deducting the China Servants, ...		483

does not equal one half of the deaths, but this statement we would remark is not framed to show the chance an individual entering the Bengal Civil Service has of retiring with a fortune. For the exhibition of that result a very different table must be prepared, framed on the principle of following out the nominations of those particular years of which all the nominees are expended by death or retirement. There are four years in this predicament, the results of which give the following ratios of deaths to retirements.

Nominations.	Deaths.		Retirements.	
	Before 20th year.	In or after 20th year.	Before 20th year.	In or after 20th year.
1790 19	8	3	2	6
1792 18	5	2	2	9
1794 26	12	5	5	4
1798 32	8	8	6	10
95	33	18	15	29
	51		44	

From this it would appear that out of ninety-five Bengal nominations the deaths are 51, or more than half; the retirements are 44, of which 15 occurring before the 20th year cannot be considered as retirements with fortunes made in India. Twenty-nine, however, out of 95, or somewhat less than one-third, is the proportion of retirements with fortune afforded by the results of these four years.

To return, however, to the life tables: we have not thought it worth while to publish on this occasion the extended tables in which the results of each individual year have been combined for the formation of the corrected general result now exhibited. These exist together with elaborate registers with the name of every Bengal Civil Servant inscribed ready to be referred to by any person desirous of looking further into the detail. We explained fully in the article of July, 1832, the method we had followed in extracting and combining these results, and it would be an unnecessary repetition therefore to follow the process of computation again through each of the stages. We conclude with expressing our desire that the present table may supercede altogether Table III. of the article of July, 1832, and we vouch for its superior and, we believe, perfect accuracy. The quinquennial percentage is carried only to the thirteenth year of residence or 49th of life. The results of the remaining years are gathered into our percentage for the whole.

Amended Table for shewing the risks of life in the Bengal Civil Service, founded on the actual casualties upon the nominations made to that Service from 1790 *to* 1836, *the first year being computed from the* 1*st January, after the year of nomination.*

Year of Service.	Age.	Number of Servants.	Deaths.	Total deaths in 5 years.	Percentage rate of deaths in 10,000.	Retirements actual.	
1	20	975	19			2	
2	21	933½	22			3	
3	22	4525 906½	18	90	199	7	26
4	23	878½	19			5	
5	24	835½	12			7	
6	25	790½	10			7	
7	26	754	17			4	
8	27	3454½ 694½	17	72	208	3	21
9	28	638	20			4	
10	29	577½	8			3	
11	30	545	6			2	
12	31	519½	14			1	
13	32	2469½ 489	8	41	166	2	13
14	33	468	5			6	
15	34	448	8			2	
16	35	424	6			6	
17	36	403	9			2	
18	37	1879 376½	11	44	234	7	24
19	38	351	10			2	
20	39	324½	8			7	
21	40	293½	11			9	
22	41	270	10			6	
23	42	1214½ 239	10	43	354	6	33
24	43	216	5			2	
25	44	196	7			10	
26	45	167½	7			9	
27	46	148	7			8	
28	47	660½ 129	3	24	363	8	31
29	48	114½	4			1	
30	49	101½	3			5	
31	50	88½	4			9	
32	51	67½	1			5	
33	52	299 57½	3			5	
34	53	47½	6			1	20
35	54	38	2			0	
			16				
36	55	32½	1			1	
37	56	24½	1			5	
38	57	109 19½	1			1	
39	58	17½	0	21	486	1	8
40	59	15	0			0	
			3				
41	60	9	1			2	
42	61	5	0			0	
43	62	25 5	0			0	
44	63	3	0			0	2
45	64	3	1			0	
			2				

III.—*A Grammar of the Sindhí language, dedicated to the Right Honorable Sir* ROBERT GRANT, *Governor of Bombay. By* W. H. WATHEN, *Esq.*

It has been often paradoxically asserted, that those who have the most to do, contrive also to have the most leisure. The maxim will admit of as easy illustration in India as elsewhere, and may be supported by the highest examples, if it be conceded that the office of Secretary, or Minister, to an Indian Government requires a full allotment of time, an ample share of mental and mechanical exertion; for the Secretariat of either Presidency may be regarded as the fountain head of authorship on all Indian subjects, literary, political or historical. We need not recapitulate digests of law, Hindu and Musulmán; narratives of campaigns; schemes of fiscal administration, which may naturally enough emanate from such sources; but in pure literature, editorship of oriental publications, and translations therefrom, our Secretaries have ever occupied the foremost rank.

The present production of the Chief Secretary at Bombay is only a fresh instance of the talent and industry which in India is sure to win the reward of high appointment; but it is deserving of more than usual encomium, being a work of sheer labour and troublesome compilation, unsweetened with the associations of the annalist depicting events on which the fate of empires rested;—unenlivened by the ingenuities of antiquarian speculation or the romance of mythologic fiction. His has been a dry labour of utility, not of love, "to facilitate the intercourse of Europeans with the inhabitants of *Sindh* and the adventurous merchants of *Shikárpur* and *Múltán*." It is a sequel to the famous Indus-navigation treaty;—one better calculated to effect a mutual understanding than the diplomatist's negociation with its uncompromising tariff! That it serves as a faithful interpreter, we have at this moment the best testimony to offer in a letter from an officer now travelling on the *Indus*, who says, "The Sindhí grammar does not contain a mistake, and I have never found myself at a loss, with a knowledge of its contents." It may seem extraordinary that such a work should have been wholly compiled at a distance from, and by one who has, we believe, never visited, the country; but this is explained by the constant resort of the Sindhís to *Bombay*, where for the last 20 or 30 years at least 10,000 persons, the greater part of the population of *Tatta*, have become domiciled, speaking and writing their own tongue.

The Sindhí language is spoken "through the whole province of *Sindh*, and is said to be understood as far north as the territories of

BAHA'WAL KHÁN, the *Deráját*, and *Múltán*; it prevails westward in *Cutch-Gandava*, *Shál*, *Mastúng* and *Pishín*; eastward in *Cutch* it is spoken with some slight variations in formation and accent."

May we not venture to extend these boundaries, if not of the precise idiom, at least of the connected dialects of the *Sindhí* language?—Have not the words *Sindhí* and *Hindí* a common origin, the permutation of the *h* and *s* being nothing more in fact than the same difference of dialect which is preserved to this in the twin names of the river, *Sinde* and *Indus*? This at least is one of the most plausible theories of the origin of the name of India, and it is supported by innumerable examples of Zend and Persian words, in which the aspirate has taken the place of the Sanscrit sibilant.

The commercial celebrity of the Hindus in all ages attaches with undiminished force to the *Sindh* and *Márwár* merchant of the present day. They have their branch *kothís* not only throughout Upper India, but in *Calcutta*, *Bombay*, and wherever commerce is active. Theirs may be said to be the very language and archetype of hoondee circulation—the monopoly of banking business throughout the country. "The adventurous nations of *Shikárpur* and *Múltán* are spread in colonies throughout the whole of the extensive provinces of Central Asia, and form the chief medium for commercial transactions in those countries. They are to be found in *Russia*, at *Astrakhán*, through *Baluchistán* and *Seistán*, as well as at *Hirát*, and *Bokhára*: they possess political influence occasionally with the chiefs of those countries, from their command of capital, and their frequently taking farms of the revenues. Travellers starting from *Shikárpur* or *Múltán* (add *Bombay*, *Calcutta*, or *Benares*) might from them obtain bills of exchange on *Russia*, *Persia*, *Khorásán*, and Central Asia."

The neighbouring province of *Gujerat* is equally celebrated for its early commercial enterprize. We learn from HAMILTON, that the numerous tribes of *banyas*, named banyans by the English, are indigenous to this part of India, whence they have travelled to all parts of the continent, and formed settlements, "where their descendants continue to speak and write the *Gujerátí* tongue, which may be pronounced the grand mercantile language of Indian marts*."

For the foreign commerce of India the mouths of the *Indus* probably held long precedence to *Gujerat*, *Cambay*, and *Baroach*, the *Barugaza* of ARRIAN, which, more distant from Arabia and the Persian Gulph, would require a more advanced knowledge and boldness of navigation. Indeed it is a curious fact, that *Pátala*, the seaport on

* HAMILTON'S Hindostan, I. 612.

the *Indus*, still famous in ALEXANDER's time, should no longer be mentioned by the author of the Periplus, in whose time *Minagara* (*Mahá Nagar ?*) had become the capital of the country.

Pátala, in further support of our argument that *Sindh* was one focus of *Indian* civilization and colonization, is accounted by the Hindus the seat of government of the very founder of the Solar races, the Rajpúts of modern India; Mr. CSOMA KÖRÖS extracts the following particulars regarding it from the Tibetan authorities.

"*Potala* or *Potalaka* (Tib. རྩ་ལག་རྡོག *gru-hdsin*, or vulgo *kru-dsin*, boat-receiver, a haven or port) is the name of an ancient city at the mouth of the *Indus* river, the residence of IKWÁKU and his descendants of the *Suryavamsa*. Four young princes (who afterwards were surnamed SHA'KYA) being banished from that city by their father, took refuge in *Kosala* on the banks of the *Bhagirathí* river (in the modern province of *Rohilkhand*) and built the city of *Capilavastu*. The residence of the Dalai Láma at *Lassa* (built about the middle of the 12th century) is likewise called *Potala*, པོ་ཏ་ལ, because CHENREZIK (སྤྱན་རས་གཟིགས་དབང) the patron of the Tibetians, the spiritual son of AMITÁBHA, is said to have resided at *Potala* in ancient India, and to have visited *Tibet* from that place*."

The Sindhian origin of the Rajpút tribes derives no inconsiderable support from the evidence of the grammar and vocabulary before us. Here we find the mass of the language (excluding of course the Persian infusion) merely a little different in spelling and inflexion from the *Brijbháká* or pure *Hindí* of Upper India; while there is a strong argument that the *Sindhí* is the elder of the two, in the more regular and elaborate inflexions of its cases and tenses; and particularly in the complete conjugation of the auxiliary verbs *hawan* and *thiyan*, to be, of which, in the *Hindí*, we find but a single tense of the latter†, and a few tenses and a present and past participle of the former, extant. Although we cannot attempt to enter upon a critical examination of the grammar, which would indeed require a knowlege of Sanskrit, and perhaps Zend in addition to the vernacular, we feel it impossible to resist inserting these two verbs, as well for the important part they enact in modern dialects, as for the philological interest of these almost universal auxiliaries, particularly in regard to the pronominal affixes, elsewhere become nearly obsolete. The infinitives, like the Persian and Sanskrit, terminate in *an*.

* CSOMA's MSS. See the Observations of M. BURNOUF in the preceding number, page 291.

† Or rather, none at all in the *Hindí*: for *thá thé thí* belong to the *Hindustháni* or *Urdu*.

Conjugation of the Sindhí auxiliary verbs, to be.

Infinitive. *Ho-wan* (Sanskrit root भू.) *T,hi-yan* (S. स्था, or अस्ति ?)

Indicative. 1st Present.	S. 1.	*Awn* áhiyan	I am.	Caret	
	2.	*Tun* á un			
	3.	*Hu* ahe			
	P. 1.	*Asin* áhiyun			
	2.	*Ain* áhiyo			
	3.	*Hui* áhin			
2nd Present.	S. 1.	Huw n-t,ho	I am being.	T,híyán t,ho (fem. thí)	
	2.	Huen-t,ho		T,hiyen t,ho	
	3.	Hoe-t,ho		T,hiye t,ho	
	P. 1.	Ho,un-thá		T,hiyun thá	
	2.	Ho,o-thá		T,hiyo thá	
	3.	Ho,wan-thá		T,hiyan thá	
1st Imperfect.	S. 1.	m. Hos fem.	Huís m.	T,he thíyos	f. T,he t,his
	2.	Ho,en	Hoen	T,he t,hiyen	T,he t,hien
	3.	Ho	Hui	T,he t,hiyo	T,he t,hí-i
	P. 1.	Hua sun	Huyun sun	T,het,hiya sun	T,he thiya sun
	2.	Hua	Huyun	T,he t,hiya	T,he thiya
	3.	Hua	Huyun	T,he t,hiya	T,he thiyun
2nd Imperfect.	1.	Hundo-hos, &c. (m. Plural Hundá)	Hundí huis	T,híndo hos, &c. (masc. plur. Thíndá)	T,hindí husi
Perfect.		Caret.	S. 1.	Thiyos	Thus
			2.	Thiyen	Thien
			3.	Thiyo	Thíi
			P. 1.	Thíya sun	Thii sun
			2.	Thiya	Thiya
			3.	Thiya	Thiyun
Preterperfect.		Caret.	S. 1.	Thiyo áhiyán	Thíi, &c.
			2.	——áhen	
			3.	——áhe	
			P. 1.	Thiyá áhiyun	
			2.	——áhiyo	
			3.	——ahin	
Pluperfect.		Caret.	S. 1.	T,huyo hos	Thí huis
			2.	——hoen	—— huen
			3.	——ho	—— hui
			P. 1.	Thiyá hasun	Thíyun hasun
			2.	——huá	Thiyá huá
			3.	——huá	Thiyun huyun
Future.	S. 1.	Hundos		T,hindos	Thindis
	2.	Hunden		T,hinden	Thinden
	3.	Hundo		T,hindo	Thindí
	P. 1.	Hundá sun		T,hinda sun	Thindi sun
	2, 3.	Hundá		T,hinda	Thindiyun
Subjunctive. Present.	3.	Hundá		T'hinda	
	S. 1.	Huán	I may be. m.	Thindo hundos	
	2.	Hoen		—— —— den	
	3.	Hoe		—— —— do	
	P. 1.	Ho,un		Thinda hunda sun	
	2.	Ho,o		—— hundá	
	3.	Hon		—— hundá	
Perfect.		by adding *je*, if, to the indicative.	S. 1.	Thíyo hundos	
			2.	—— den &c.	
Future.		I may, or will be.	S. 1.	Thíyan	P. 1. Thíyun
			2.	Thiyen	2. Thíyo
			3.	Thiye	3. Thíyan
Imperative.	S. 2.	Ho-tun	S. 2.	Thi-tun	
	P. 2.	Howo-ain	P. 2.	Thiyo-ain	
Participle present.		Hundar, being.		T,hindar	
past.				Thiyal	
perfect.		having been.		Thí, Thaí, Thi kare	
				Thaí kare	

In a similar manner is conjugated *Wanjan* (H. jáná) to go, used as the auxiliary of the passive of other verbs: *wendo*, going—*wayo* (H. gayá) gone: *wanj-tun*, go thou.

The personal pronouns *awan*, *tún*, and their plurals *asin*, *tawin*, approach nearly to the Sanskrit *aham*, *twam*; *asmán*, *yusmán* (obj.): but for the third personal pronouns, as in *Hindí*, the demonstratives *he* and *hu* (H. *yih* and *wuh*) are employed, in lieu of the Sanskrit *seh*, *sá*, *tat*; in *bhuka*, sing. सो, सा; plur. ते, तिन. In the declensions of nouns we miss the *ka-ke-kí* to which TIMUR's soldiery professed such an abhorrence, but it is merely softened into *jo-jé-jí já*. Of these, however, we find traces in the Hindi pronominal inflexions *mujhé*, *tujhé*, which seem to be identical with *mun-jo* and *to-jo* of the *Sindhí*. This affix may be the adjectival or possessive य *ya* of the Sanskrit: and analogies of both might be pointed out in Greek, as in the nearly synonimous βασιλε-ια and βασιλι-κα. One example of declension will suffice:—

Múrs, a man.

	Singular.	*Plural.*
Nom. Acc. Voc.	Múrs, a man, oh man.	Múrs, men, oh men.
Gen.	Múrsa-jo-ji-jé-j ..	Múrsana-jo, &c.
Dat.	Múrsa-khe.	Múrsana-khe.
Abl.	Múrsa-khon.	Mursana-khon.

When the nominative ends in the vowel *o* the plural is in *á*: the feminine takes *un* in the pural, as *zál* a woman, *zálun*.

We do not quarrel with the author for *romanizing* his grammar, as it is principally intended for European students; but we are inclined to cavil at the employment of the Persian alphabet in conjunction with the Roman rather than the Nágarí, which would certainly conform with more facility to the palatials, dentals, and aspirates of the Indian family: बूकरी बिल्ली खां expresses more elegantly as well as more precisely, *Buchhrí billí khon* (from a bad cat) than بچهري بلي کهون.

It is a curious circumstance that most of the masculine substantives and adjectives terminate in ô; a peculiarity also remarked in the Zend language, and strikingly exemplified on all the legends of our Bactrian and Indo-Scythic coins, whether in the Greek or in the Pehleví character. The extensive vocabulary attached to the grammar may therefore perhaps prove of use in decyphering these ancient relics; though more might be expected from a scrutiny of the language of the soi-disant descendants of the *Kaiánian* in the *Kohistán*. We recommend M. MASSON to collect vocabularies from these people and from the *Siàhposhes*.

One of the most singular anomalies of the *Sindhí* language, is the arrangement of its alphabet, which differs totally from the perfect classification followed throughout the peninsula. The author makes

no remarks on the subject further than that " with one or two exceptions the letters are merely represented by ciphers, combinations of numbers, and fractional parts: for example ||| ($\frac{3}{4}$ths) for *n*; ४ (4) for *ch*; &c. &c.!"

Having on a former occasion noticed the singular application of the Arabic numerals to the alphabet of the *Maldive* islands, we were struck with the apparent similarity of the process here pointed out at the opposite extremity of India; but a closer examination removed most of the analogy by shewing that the *Sindhí* and *Múltání* letters, although strikingly similar in form to the common numerals, were all deducible from the elements of the ordinary Deva-Nágarí symbols, and that they are, in fact, but one step removed from the *Márwárí* and *Mehajaní* of our mercantile class. This we have endeavoured to shew in the accompanying lithographic table (XXII.) (being always happy to add to our catalogue of Indian alphabets!). The *Márwárí* (which does not differ essentially from the *Benárasí*) we have added on the authority of gomáshtas residing in *Calcutta*; but it must be remembered that these written characters are peculiar to the mercantile class, and that the learned of *Márwár* and *Sindh*, as of other places, use the Deva-Nágarí forms. As to the *arrangement* of their alphabet given by our author on the authority of merchants, it seems to be nothing more nor less than a couple of *memoria-technica* lines contrived to comprehend the whole of the letters combined with their most usual vowel sounds; so that in ordinary writing the merchants may dispense with the application of the *mátras* or vowel-marks. The inconvenience of this omission is not much felt in the limited scope of mercantile correspondence, and in the drafting of hoondees, where the same sentences are constantly repeated. Indeed the first memorial line of the *Sindhí* and *Múltání* alphabets,

प ज स ल म त ह व घ ष भ द् ट क च द्.

pronounced, *Puja salámatí howen ghani Bhai Tek Chand,* (with vowels) generally forms the opening (mutato nomine) of every mehájan's epistle, as may be seen in the example given by our author*. It may be translated " Prayer (or I pray) that health may be abundant to brother Ték Chand." The continuation is as follows:

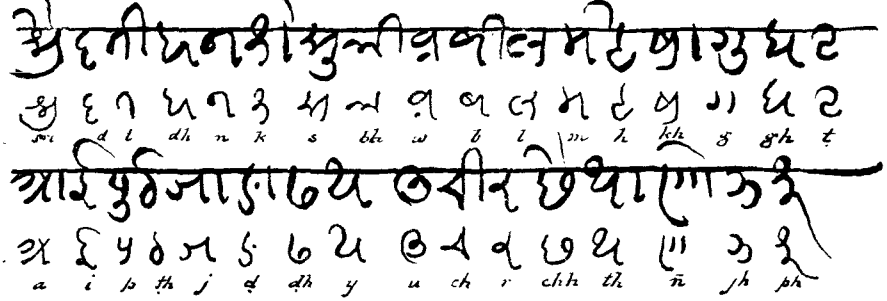
छ व र न थ ड ख ढ ग य ड ख च फ ध ध द्.

pronounced, *chha ba ra náth ŗáe ŗh gajan khatrí pha dhaú*†.

* The meaning of the specimen of hoondee endorsement lithographed at the foot of the plate is " one half (being) rupees twenty-five, double fifty, to be paid in full."

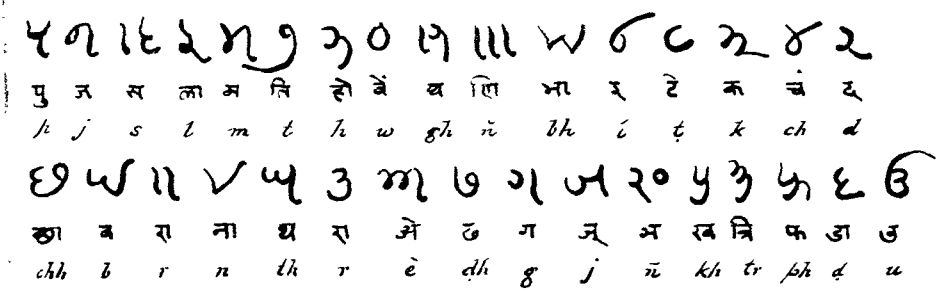
† We have ventured to alter one or two of the letters conjecturally, which in the lithographed plate copied from the grammar, are repeated, while those we have substi-

Marwari Alphabet, with and without mátras

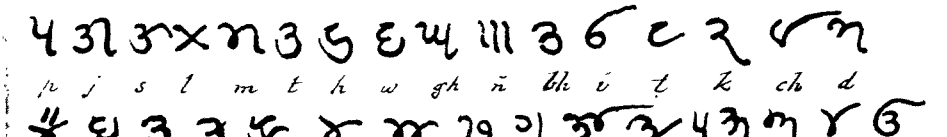


Śrí datá dhanko subhawe bála mahi khago ghatang
Ai puṭhaj ḍaḍhyu Uchare chhuthañ jhapang

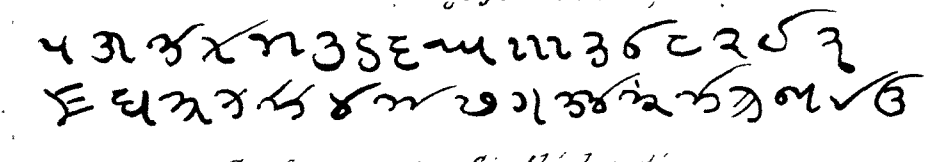
Sindhí or Khudawadi Alphabet.



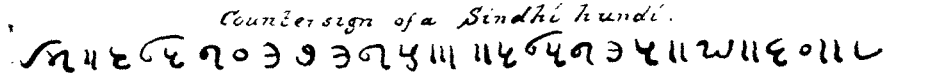
Multáni or Saraí Alphabet.



Puja salámatí horen ghani bhái ṭèk chand
Chhábra nath raedh gujánikhatripha ḍáu.



Counter sign of a Sindhí hundí.



nime rupiye pañjwih tehiñja bina rupiya pañjah púrá bhare devná.

This second line has probably a meaning also, but not a single word of it can be found in the vocabulary; nor can the natives be persuaded to divulge it, whether from superstitious prejudice or from ignorance; it may be merely a nonsense verse embodying the rest of the letters. CHABRANA'TH RAI sounds like a name or title.

The *Márwárí* alphabet contains two poetical lines almost as unintelligible as those of *Sindh*. As written by our informant a gomáshta in one of the banking houses, and lithographed in Plate XXII. with the vowel marks, they abound in errors, nor could we obtain from him any inkling of their meaning. By dint of persevering inquiry, and aided by the Hindí and the Sanskrit dictionaries, we have restored what seems to be the right reading of the text as follows:

श्री दाता धनका सभाव बाल मोह खग घटं
आई पूठ जड ढयो उचरी छथण झफं

or in Roman characters, (differing from the version in the Plate,)

Srí dátá dhanko sabhaw, bála moh khaga ghatang.
A'i pútha, jar dhayo, Uchari, chattan jhapang.

which, translated as literally as the idiom will allow, is

"Charity (1) of riches is the natural fruit, to me boy, oh god, (2) may it be so.
Reading attained, ignorance is dispelled (3); by good enunciation (4), wisdom (5) instantly (6), (is attained)."

(1.) श्रीदाता masculine, a charitable man. धनको to wealth, सभाव is natural. (2.) खग. the sun, a deity, (WILSON's Dict.) might lead to the supposition that the couplet was invented while the people were sun-worshippers! घटं *ghatang*, may it happen. (3) ढयो from ढाना to break down, destroy. (4) उचरी for उचार pronunciation, utterance. (5) छथण a corruption from चेतन intelligence, wisdom. (6) झफं synonymous with झप *jhap*, instantaneously.

At the bottom of the same plate we have inserted the *Sindhí* alphabet as written by their gomáshtas in *Calcutta*; because some of the letters vary from the *Bombay* form; and both differ somewhat from a genuine *Sindhi* alphabet procured by Lieut. LEECH at *Mithyání* on the *Indus*, which we did not receive in time to insert in the plate. The principal variations are in the aspirated letters *kh*, *gh*, *ph*, and *h*; *j* and *y* are expressed by the same character, which is formed as number 2 of the *Múltání* alphabet. The letter ड is also expressed by ड़ which accounts for its absence in the memorial line.

Our author notices the curious custom of affixing certain numbers, ७४॥ or $74\frac{1}{2}$; and १॥ or $1\frac{1}{2}$ to the commencement of all hoondees and written documents, as not yet satisfactorily explained. Our readers

tuted are there omitted. We have been guided in doing so by the analogy of the forms of the letters to the Nagari elements.

will remember the rather whimsical definition of the first of the two symbols by Col. TOD, from a traditionary record of the 74½ maunds of *zinars* taken from the necks of the slaughtered Rájpúts at AKBER's sack of *Chitor**. But, to say nothing of the far too modern date of introduction thus argued, and of its inapplicability to countries beyond the desert; a more general and simple origin may be traced for it in the mysterious invocation ॐ *Om*, prefixed by the orthodox to all documents. In the inscriptions published in Plates VII. and XVII. this word is written ९३॥ which differs little from the ०३॥ above. The triune symbol is often represented by ९ alone, which with the prosodial mark ॥ would be read as "one and a half."

But we are devoting too much space to a subject of minor importance: nor is the alphabet new; for we find the type (at least of the *Múltání* alphabet), have been long since cut and used at the *Serampore* press. We cannot conclude without making known a promise of a valuable addition to Mr. WATHEN's labours by Lieut. LEECH, in the shape of a *Balochy*, and *Barahuí* vocabulary. We shall soon thus have at our command all the cognate dialects of India to place in the hands of some future giant philologist who may undertake to unravel the tangled skein, and shew which are the primitive tongues of the aborigines of our hills and plains, and whence and when came the infusions of foreign vocables which now predominate in Indian speech.

J. P.

IV.—*On additional fossil species of the order* QUADRUMANA *from the Sewálik Hills. By* H. FALCONER, *Esq.* M. D., *and Captain* P. T. CAUTLEY.

In the November number of the Journal, vol. 5, p. 739, Messrs. BAKER and DURAND have announced, in the discovery of a quadrumanous animal, one of the most interesting results that has followed on the researches into the fossil remains of the *Sewálik Hills*. The specimen which they have figured and described comprises the right half of the upper jaw, with the series of molars complete; and they infer that it belonged to a very large species. In the course of last rains we

* "Marked on the banker's letter in Rájasthán: it is the strongest of seals, for 'the sin of the slaughter of *Chitor*' is thereby invoked on all who violate a letter under the safeguard of this mysterious number."—*Tod's Rájasthán*, I. 329.

detected in our collection an *astragalus*, which we referred to a quadrumanous animal. The specimen is an entire bone, free from any matrix and in a fine state of preservation from having been partly mineralized with hydrate of iron. It corresponds exactly in size with the *astragalus* of the *Semnopithecus Entellus* or *Langoor*, and the details of form are so much alike in both, that measurement by the callipers was required to ascertain the points of difference. We have forwarded the specimen with a notice to the Geological Society of *London*, after keeping it some months in reserve, having been diffident about resting the first announcement of fossil *Quadrumana* on any thing less decisive than the cranium or teeth.

This *astragalus* in conjunction with Messrs. BAKER and DURAND'S specimen, satisfied us of the existence of at least two distinct fossil *Quadrumana* in the *Sewálik Hills*. We have lately become possessed of several fragments, more or less perfect, belonging to the lower jaws of two species, both smaller than Messrs. BAKER and DURAND'S fossil. These we shall now proceed to notice.

The principal specimen is represented in fig. 1. It consists of both sides of the lower jaw; a great portion of the right half is entire with the whole series of molars; the left half is broken off to the rear of the antepenultimate molar. The two middle incisors are present, and also the left canine broken across at its upper third. The right canine and the lateral incisors had dropt out leaving but the alveoli. The molars of the left side are destroyed down to the level of the jaw. The right ramus is wanting in more than half its width, together with the articulating and coronoid processes, and a portion of the margin at the angle of the jaw is gone. The specimen is a black fossil, and strongly ferruginous; the specific gravity about 2.70. It was encased in a matrix of hard sandstone, part of which is still left adhering to it.

The jaw had belonged to an extremely old animal. The last molar is worn down so as to have lost every trace of its points, and the three teeth in advance of it have been reduced to hollowed-out discs, encircled by the external plate of enamel. The muscular hollow on the ramus for the insertion of the temporal muscle is very marked, being .35 inches deep upon a width of .55.

The dimensions contrasted with those of the *Langoor* or *Semnopithecus Entellus* and the common Indian monkey or *Pithecus Rhesus*, are as follow:—

Dimensions of the lower Jaw.	Fossil Sewálik Monkey.	Semnopithecus Entellus.	Pithecus Rhesus.	Ratio of the Sewálik fossil to the Entellus.	
	inches.	inches.	inches.		
1. Extreme length from the anterior margin of the ramus to the middle incisors, ...	3.6	2.85	2·5	4	3.2
2. Extreme length of jaw ; (calculated in the fossil,)	5.3	4.	3.6	4	3.02
3. Height of jaw, under the 2nd molar measured to the margin of the alveoli,.....	1.35	1.05	.85	4	3.1
4. *Ditto* at the rear molars, ...	1.2	1.1	.95	4	3.6
5. Depth of symphisis, ...	1.9	1.4	1.1	4	3.
6. Space occupied by the molars,.....	2.3	1.9	1.5	4	3.3
7. Interval between the 1st molars, ...	.9	.75	.65	4	3.2
8. Antero posterior diameter of the canine,..	.5	.4	.3	4	3.2
9. Width of jaw behind the chin under the 2nd molar, ...	1.15	1.05	.95	4	3.7

As in all other tribes of animals in which the species are very numerous, and closely allied in organization, it is next to impossible to distinguish an individual species in the *Quadrumana* from a solitary bone. In the fossil, too, the effects of age have worn off those marks in the teeth, by which an approximation to the subgenus might be made. It very closely resembles the *Semnopithecus Entellus* in form, and comparative dimensions generally. The differences observable are slight. The symphisis is proportionally a little deeper than in *Entellus*, and the height of the body of the jaw somewhat greater. The chin, however, is considerably more compressed laterally under the second molar than in the *Entellus*, and the first molar more elongated and salient. So much of the canine as remains, has exactly the same form as in the *Entellus*, and its proportional size is fully as great. As shown by the dimensions, the jaw is much larger than in the full grown *Entellus*: in the former the length would have been about 5.3 inches, while in the latter it is exactly 4 inches. The fossil was a species of smaller size than the animal to which the specimen described by Messrs. BAKER and DURAND belonged, but less so than it exceeds the *Entellus*.

Our limited means for comparison, restricted to two living species, besides the imperfection of the fossil, and the few characters which it supplies, do not admit of affirming whether it belongs to an existing or extinct species; but the analogy of the ascertained number of extinct species among the *Sewálik* fossil mammalia, makes it more probable that this monkey is an extinct one than otherwise. There is no doubt

about its differing specifically from the two Indian species with which we have compared it.

The next specimen is shown in fig. 5. It is a fragment of the body of the right side of the lower jaw containing the four rear molars. The teeth are beautifully perfect. It had belonged to an adult although not an aged animal, the last molar having the points a little worn, while the anterior teeth are considerably so. The dimensions, taken along with age, at once prove that it belonged to a different and smaller species than the fossil first noticed.

The dimensions are as follow :—

Dimensions of the lower Jaw.	Smaller fossil Sewálik species.	Larger fossil Sewálik species.	Semnopithecus Entellus.	Pithecus Rhesus.
	inches.	inches.	inches.	
1. Length of space occupied by the four rear *molars*,	1.48	1.7	1.48	1.25
2. Height of jaw at the third molar,	.95		1.1	.9

The length of jaw, therefore, estimated from the space occupied by the teeth, would be 4 inches, while in the larger fossil it is 5.3 inches; a difference much too great to be dependent merely on varieties of one species. Besides we have another fragment, also belonging to the right side of the lower jaw, and containing the last molar which agrees exactly in size with the corresponding tooth in the figured specimen. This goes to prove the size to have been constant. The fossil, although corresponding precisely in the space occupied by the four rear molars with the *Entellus*, has less height of jaw. There is further a difference in the teeth. In the *Entellus* the heel of the rear molar is a simple flattened oblique surfaced tubercle, rather sharp at the inside. In the fossil, the heel in both fragments is bifid at the inside. The same structure is observable in the heel of the rear molar of the common Indian monkey *P. rhesus*. It is therefore probable that the fossil was a *Pithecus* also. It was considerably larger, however, than the common monkey, and the jaw is more flattened, deeper, and its lower edge much sharper than in the latter. This difference in size and form indicates the species to have been different.

It would appear, therefore, that there are three known species of fossil *Quadrumana* from the *Sewálik* hills: the first a very large species discovered by Messrs. BAKER and DURAND; the second a large species also, but smaller than the first, and considerably larger than

the *Entellus;* the third, of the size of the *Entellus,* and probably a *Pithecus;* and further that two of the three at least, and most probably the third also, belonged to the types of the existing monkeys of the old Continent, in having but five molars, and not to the *Sapajans* of *America.*

There are at present upwards of 150 described species of existing *Quadrumana;* and as the three fossil ones all belonged to the larger sized monkeys, it is probable that there are several more *Sewálik* species to be discovered. We have some specimens of detached teeth. of large size, which we conjecture to be quadrumanous; but their detached state make this conjecture extremely doubtful.

Besides the interest attaching to the first discovery in the fossil state of animals so nearly approaching man in their organization, as the *Quadrumana,* the fact is more especially interesting in the *Sewálik* species, from the fossils with which they are associated. The same beds or different beds of the same formation, from which the *Quadrumana* came, have yielded species of the camel and antelope, and the *Anoplotherium posterogenium,* (nob.): the first two belonging to genera which are now coexistent with man, and the last to a genus characteristic of the oldest tertiary beds in Europe. The facts yielded by the Reptilian orders are still more interesting. Two of the fossil crocodiles of the *Sewálíks* are identical, without even ranging into varieties, with the *Crocodilus biporcatus* and *Leptorynchus Gangeticus* which now inhabit in countless numbers, the rivers of India; while the *Testudinata* are represented by the *Megalochelys Sivalensis* (nob.), a tortoise of enormous dimensions which holds in its order the same rank that the *Iguanodon* and *Megalosaurus* do among the *Saurians.* This huge reptile (the *Megalochelys*)—certainly the most remarkable of all the animals which the *Sewálíks* have yielded—from its size carries the imagination back to the æra of gigantic Saurians. We have leg bones derived from it, with corresponding fragments of the shell, larger than the bones in the Indian unicorned Rhinoceros!

There is, therefore, in the *Sewálik* fossils, a mixture in the same formation of the types of all ages, from the existing up to that of the chalk; and all coexistent with *Quadrumana.*

P. S. Since the above remarks were put together, we have been led to analyse the character presented by a specimen in our collection which we had conjectured to be quadrumanous. The examination proves it to be so incontestibly. The specimen is represented in figs. A, B, and C, of Pl. XVIII. It is the extra-alveolar portion of the left canine of the upper jaw of a very large species. The identification rests upon two vertical facets of wear, one on the anterior surface, the other on the

inner and posterior side, and the proof is this. The anterior facet *b* has been caused by the habitual abrasion of the upper canine against the rear surface of the lower one, which overlaps it, when the jaws are closed or in action. This facet would prove nothing by itself, as it is common to all aged animals in the carnivora and other tribes in which the upper and lower canines have their surfaces in contact. The second facet *c must* have been caused by the wear of the inner and rear surface of the canine against the outer surface of the first molar of the lower jaw. But to admit of such contact, this molar must have been contiguous with the lower canine, without any blank space intervening; for if there was not this contiguity the upper canine could not touch the lower first molar, and consequently not wear against it. Now, this continuity of the series of molars and canines without a diasteme or blank interval, is only found, throughout the whole animal kingdom*, in man, the *Quadrumana*, and the *Anoplotherium*. The fossil canine must therefore have belonged to one of these. It were needless to point out its difference from the human canine, which does not rise above the level of the molars. In all the species of *Anoplotherium* described by Cuvier, the canines, while in a contiguous series with the molars, do not project higher than these, being rudimentary as in man. Of the *Sewálik* species, *Anoplotherium posterogenium*, (nob.) we have not yet seen the canines; but it is very improbable, and perhaps impossible, that the fossil could belong to it. For if this species had a salient canine, it must have been separated from the molars by an interval as in the other *Pachydermata*; otherwise the jaws would get locked by the canines and molars, and the lateral motion required by the structure of the teeth, and its herbivorous habit, would be impracticable; and if there was this interval, the upper canine could not have the posterior facet of wear. The fossil canine must therefore have belonged to a quadrumanous animal. This inference is further borne out by the detrition of the fossil exactly corresponding with that of the canines of old monkeys.

The dimensions are:—

Length of the fragment of canine, ...	1.75	inches.
Antero-posterior diameter at the base, ...	.8	
Transverse ditto, ...	.7	
Width of the anterior facet of wear, ...	.6	

The two diameters are greater than those of the canine of the *Sumatra* Orang-otang described by Dr. Clarke Abel† as having been 7½

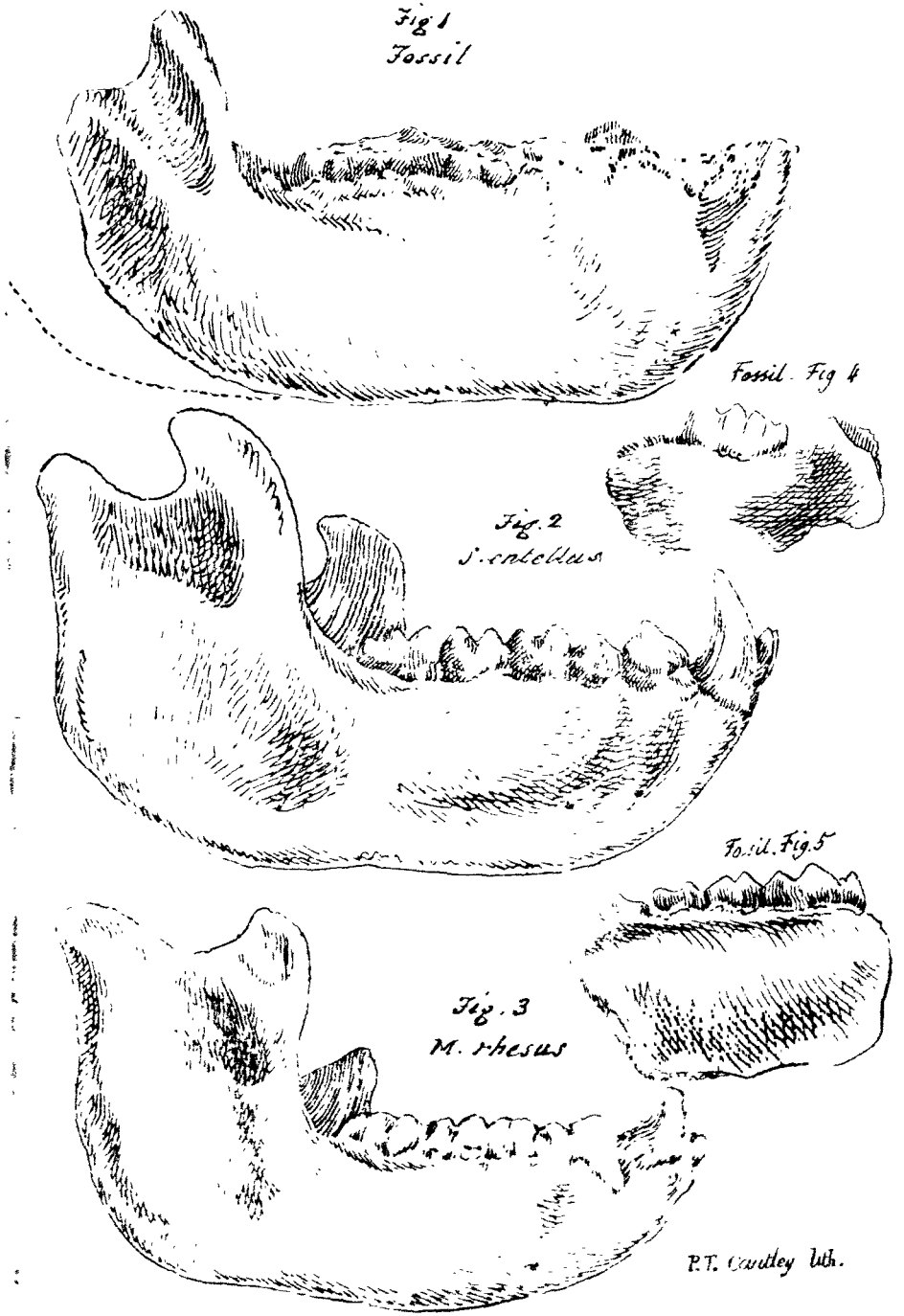
* Cuvier Ossemens fossil, tome 3, p. 15.

† Asiatic Researches, vol. 15, p. 498.

feet high. The *Cynocephali* have large and stout canines, more so comparatively than the other *Quadrumana*. But to what section of the tribe our fossil belonged, we have not a conjecture to offer. We may remark, however, that the tooth is not channelled on three sides at the base, as in the *Entellus*. Does the fossil belong to the same species, as the jaw discovered by Messrs. BAKER and DURAND, or to a larger one?

NOTE. We have sketched Dr. FALCONER's highly curious fossil tooth in position with the lower jaw of the Sumatran Orang-otang from the Society's Museum, in figure C of Pl. XVIII. There is a third facet of wear at the lower extremity *d* which, on reference, we find Dr. FALCONER attributes like *c* to attrition against the first molar, being observable, he says, in many aged animals. The worn surfaces *c* and *d* are uniformly polished, and have evidently originated from attrition against a tooth; but with regard to the principal facet *b*, we confess we have a degree of scepticism, which can only be removed by a certainty that the fossil had been seen extracted from the matrix. In the first place, the great extent of the worn surface and its perfect flatness could hardly be caused by attrition against the lower canine which should produce a curvature measured by the length of the jaw as radius. In the next place, the enamel of the tooth is less worn than the interior and softer part of the fossil: and thirdly, on examination with a magnifier, numerous scratches are visible in divers directions: all these indicating that the facet may have been produced *on the fossil*, by grinding it on a file, or some hard flat surface. On shewing the fossil to MADHUSUDANA, the medical pandit of the Hindu College, he at once pronounced that the tooth had been ground down to be used in medicine, being a sovereign specific in the native pharmacopeia. This circumstance need not necessarily affect the question, for it is probable that the native druggist would commence his rubbing on the natural plane, if any presented itself to his choice: but Dr. FALCONER and Capt. CAUTLEY, to whom we have returned the fossil with a communication of our doubts, assure us in reply that the fossil tooth was brought in along with a large collection, so that there is every improbability of its having been in possession of a native druggist. At any rate it is not on the front wear that they so much rest their argument of its origin, as on the posterior abrasion which could only happen in the jaw of a quadrumanous animal. In fact they have recent quadrumana shewing precisely similar wear on a small scale, and no other head will do so. We find only one exception in the Society's museum, viz. the tapir, whose right upper incisor (or non-salient canine) falling between the two lower ones is worn nearly in the fashion of the fossil: but it is less elongated.—ED.

FOSSIL QUADRUMANA SEWALIK HILLS



V.—*On some new Genera of Raptores, with remarks on the old genera.*

By B. H. Hodgson, *Esq.*

I have the honor to submit, herewith, some original and amended generic characters of new forms of *Raptores* which have been described particularly in various numbers of your Journal. Those who are best acquainted with the present state of classification in regard to the *Falconidæ* and *Strigidæ* will, I apprehend, be most ready to make allowance for any possible imperfections cleaving to these characters.

Family Falconidæ. Sub-family Aquilinæ. Genus *Nisaëtus*, nob.

Bill short*, at base as high as broad, distinguished by compression without feebleness, strongly festooned. Nares large, vertical, elliptic, angulated, and wholly lateral in exposure. Wings short, firm; 5th quill longest. Tail long, firm, and square. Tarsi elevate, but not feeble, wholly feathered.

Digits elongated, nervous; the inner fore and the hind highly developed.

Acropodia reticulate with three or four scales next each talon. Talons immense, very unequal, strong and acute. Head usually crested.

Types, *N. Pulcher*, No. 680; *N. Nipalensis*, No. 9; *N. Pallidus* No. 8; *N. Grandis*, No. 7, nobis.

Habits. Preys on jungle fowl, partridges, hares: watches from a lofty perch, usually pouncing on its game when near it; sometimes pursues with energy on the wing; flight direct; does not seize on the wing. *Habitat*, saul forest, Taraï, and lesser hills. Not migratory; size rather large. Connects the most typical hawks with the most typical eagles. Digits and talons pre-eminently raptorial.

Falconinæ. Genus *Baza*, nob.

Bill as in *Ierax*, but somewhat longer and more compressed before the cere. Upper mandible with two long sharp teeth on either side, close to each other and to the hook, and directed forwards. Lower mandible with three or four smaller teeth correspondent to the above. Orbits and lores thickly and softly plumed. Nares transverse, rimiform, with the cere behind them membranous and free. Legs and feet short and thick. Tarsi half plumed, coarsely reticulate, longer than any digit. Toes cleft and depressed: the laterals subequal; the inner longer than the outer; the hind large. Acropodia wholly

* Short with reference to the *sub-family*: and so of all the generic terms subsequently employed; for instance, ears small and simple, in reference to scops, as a genus of the *sub-typical group* of *Strigidæ*.

scaled. Talons sub-equal, acute, wings long, broad-webbed, sub-equal to the tail; 3rd quill longest; notch of the inner web remoter than in *Falco* or in *Ierax*. Head crested.

Type, *Baza Syama**, nob. No. 657. *Habitat*, lower region of hills: size small; make robust: habits insectivorous.

Affinities various with *Cymindis*, *Harpagus*, *Ierax* and *Pernis*†. Not known to Indian falconers. Station in VIGOR's arrangement, at the head of the *Falconinæ*, between *Harpagus* and *Ierax*.

STRIGIDÆ, Aberrant group. Sw.

Disc and conch evanescent: ears simple. Sub-family of the eagle owls, or *Aëtoglaucinæ*, nob.

Egrets conspicuous: great size and strength. Sub-diurnal questing. A very strong elongated bill. Eminently raptorial feet, and ample gradated wings, equal or nearly so to the medial square tail.

Genus *Huhúa*, nob.

Bill equal to the head, basally straightened beyond the cere, suddenly hooked, very strong, festooned, with trenchant scarpt tomiæ.

Nares ovoid, transverse, partially exposed. Wings sub-equal to the tail: 4th and 5th quills sub-equal and longest. Tarsi short, immensely stout, thickly plumed. Toes very strong, hirsutely plumose, partially denuded and scaled; the exterior antagonising but *not* versatile. Talons immense, acute, very unequal; the inner fore conspicuously largest; and hind equal to the outer fore.

Type, *Huhúa Nipalensis*, nob. No. 54‡. *Habitat*, all three regions of the hills. Habits subdiurnal and mammalivorous.

Genus *Cultrunguis*, nob.

Bill equal to head, straightened as far as the cere, gradually curved beyond it, moderately compressed, strong. Nares elliptic, partially exposed. Wings unpectenated, equal to the tail; 4th quill longest. Tarsi sub-elevate, strong, compressed, partially or wholly nude, reticulate. Toes long, nervous, compressed, reticulate, with three or four scales next each talon; the anterior digits sub-equal; the hind large. Soles of the feet aculeated. Talons sub-equal, compressed, strong, cultrated below§.

* *Syama*, in Sanskrit, means black-blue.

† I should rather say, affinities with *Harpagus* and *Ierax*. Analogies with *Cymindis* and *Pernis*. Our bird is, unquestionably, a Falconine type—which *Cymindis* and *Pernis* are *not*.

‡ N. B. The numbers refer to the series of specimens and drawings in London.

§ Unde nomen genericum: the strong and nearly equal talons are sloped from a round back or culmen to an inferior edge, which is as sharp as a knife, and

Types, *C. Flavipes et C. Nigripes*, nob. Nos. 55 and 56. *Habitat*, the lower region of the hills. Habits diurnal and piscivorous. Size large.

Remarks. In my judgment, *Huhúa* is the equivalent of *Aquila*, and *Cultrunguis* of *Pandion*, among the diurnal *Raptores*, which are, no doubt, represented by the nocturnal *Raptores in nature*, though not yet in our systems. Those systems wholly want a Strigine sub-family answering to the *Aquilinæ*.

The section, therefore, standing at the head of my two genera must be understood as resting on no better authority than my own. It is probable that the evanescent character of the disc and conch with the absence of the operculum, belong to the hawk and falcon owls as well as to eagle owls; and that the contradistinctive marks of the latter must be sought, in their great size, their prolonged but strong bill, their formidable legs, feet and talons, their ample gradated wings, and their medial and even tails. All these marks, not less than the former ones, characterise our *Huhúa* and *Cultrunguis*: whereas our *Ninox*, which is small, and has its bill, wings and tail formed on the Falconine model, is yet equally distinguished with *Huhúa* and *Cultrunguis*, by evanescent disc and conch, and perfectly simple small ears. Hence my impression of the very great prevalence of the latter characters, which seem to extend over *all* the aberrant sub-families of the *Strigidæ, accompanied by egrets* in the eagle owls, but *not* so in the hawk and falcon owls—witness *Noctua* and *Ninox*. The presence or absence of egrets cannot be taken as a *primary* mark of the aberrant group; for to it *Huhúa* and *Cultrunguis* unquestionably belong, and both these types are egretted. Whether the egrets even constitute a *secondary* or sub-family mark of this group, may be doubted: but, at present, this would seem to be the case, and in conformity with this notion I have inserted egrets as one of the sub-family marks. There is no uniting accuracy with precision in generic characters, so long as we want family and sub-family characters. How then to characterise our *Ninox*?—a falconine type in its own circle of the *Strigidæ*, and as expressly equivalent to the lesser insectivorous falcons, as *Cultrunguis* is to *Pandion*. When recently defining *Ninox* I begun with, 'bill, disc, conch and feet, as in *Noctua*,' considering that genus —which is so remarkable in the family for its firm plumage and short wings as well as for the absence of those pre-eminently Strigine

is eminently calculated, with the aid of the spinous sole of the foot, to clutch the bodies of fish. No analogy can be more beautiful than that of *Cultrunguis* to *Pandion*.

characters, the great disc and operculated ears—as a conspicuous type. Yet hardly three months elapsed when I received from England a systematic work from which *Noctua* is wholly expurged! *Noctua*, however, will, I think, retain its place, characterised in the aberrant group of the owls by short wings and firm plumage, and leading through *Surnia* to our *Ninox*, which I believe to be the least Strigine bird on record. Let us now attempt to define it, as a genus belonging to the aberrant group of the *Strigidæ*, characterised as before.

Genus *Ninox*, nob.

Bill short, arched from the base. Nares round, anteal, apert, tumid. General contour with the character of the plumage, extremely Falconine. Wings long, firm, unpectenated, sub-equal to the tail: 3rd quill longest; 1st and 2nd very moderately gradated. Tail long, firm, even. Tarsi plumose, rather short. Toes medial, depressed, bordered, rigidly hirsute; laterals equal, hind compressed. Head smooth, small, and only Strigine in the size and position of the eye.

Type, *Ninox Nipalensis*, nob. No. 657

Habitat, central and lower hills. Habits, subdiurnal and insectivorous.

Mr. SWAINSON appears to have laid undue stress on the egrets of the owls, which seem to me but little more influential than the analogous crests of the *Falconidæ*, and more especially of the *Aquilinæ*. Disc and conch evanescent, and ears simple, are the marks of the aberrant group, taken as a *whole*. Egrets, added to great size, ample gradated wings, and a medial even tail, with powerful legs and feet and talons, seem to me the subordinate signs of the *Aëtoglaucinæ* or aquiline *sub-family* of that group. Of the *Falcoglaucinæ* or sub-family typifying the *Falconinæ*, the first glimpse appears to be afforded by our *Ninox*, which has quite the proportions and aspect of many of the lesser insectivorous Falcons. Long and *firm* wings and *tail*—the latter even; and the former but slightly gradated; and both, in a word, adapted for strong flight—would seem to be *necessary* characters of this sub-family, and they are, at all events, characters eminently conspicuous in our *Ninox*. Between the wings of *Ninox* and those of *Strix* or *Otus* there is just the same sort of difference as exists between the wings of *Falco* and those of *Buteo*, or of *Milvus*—I mean as to suitableness for vigorous flight, and expressly without special reference to the technical form of the wing.

The following comparative measurements of *Baza*, a small insectivorous Falcon, and of *Ninox*, a small insectivorous Falconine owl, can scarcely fail to excite interest. The measures are given in English feet and inches.

	Baza.	*Ninox.*
Total length, ...	1 0½	1 0¼
Length of bill, straight, to gape, ...	0 0⅞	0 0⅞
Basal height of bill, extreme, ...	0 0¾	0 0⅞
Basal width of bill, extreme, ...	0 0 13/16	0 0⅞
Head straight, from gape to occiput, ...	0 1¼	0 1¼
Length of tail, ...	0 6	0 6
Tarsus, from inner salient angle above, to the sole,	0 1¼	0 1¼
Length of central digit, from extreme base to superior insertion of the talon, ...	0 1⅛	0 1 3/16
Length of exterior digit, ...	0 0 13/16	0 0 15/16
Length of interior digit, ...	less 1/16	0 0 15/16
Length of hind digit, ...	0 0 9/16	0 0½
Straight length of central talon, ...	0 0 11/16	0 0 12/16
Ditto ditto exterior ditto, ...	0 0 10/16	0 0 9/16
Ditto ditto interior ditto, ...	0 0 11/16	0 0 10/16
Ditto ditto hind ditto, ...	0 0 9/16	0 0 7/16
Expanse of wings, ...	2 5½	2 4½
Length of a closed wing, ...	0 9½	0 9⅛
Longer diameter of opening of ear, ...	0 0 3/16	0 0 2/16
Diameter of the eye, ...	0 0 6/16	0 0 8/16
Weight of the birds, ...	7½ oz.	7½ oz.

To render this singular parallelism complete, I may add, that both birds are mature males of their respective species; that the females are scarcely larger and not at all different in aspect; that both are eminently conspicuous for the *insessorial* character of their feet, the digits of which are cleft to their origins, the soles quite flat and somewhat bordered; the anterior laterals of equal *strength* and *size*, and the central of the same thickness, and of very moderate excess of length. Wings and tail could not, in a Strigine bird, be more Falconine than those of *Ninox*; and hence these organs are almost precisely similar, both in form and proportion, to the same organs in *Baza*, which, though a Falconine bird, deviates widely from the restricted or *generic* type*. Upon the whole, the only material differences of these birds are the inferior strength of the thumb with its talon, and the superior size of the eye, in *Ninox*—both differences eminently interesting, in as much as none are more universally and distinctly referable to the respective habits and exigencies of the two families of the nocturnal and diurnal *Raptores*.

* *Peregrinus*, *Icelandicus*, &c. I exclude *Tinnunculus*, &c., under the separate sub-generic title of *Falcula*.

Mr. SWAINSON, in treating of the *Falconidæ* and *Strigidæ*, has seen perpetual reason to deplore the errors of systematic works.

In truth, it is hardly too much to say that the majority of recorded species are no species at all; and the majority of recorded genera insufficient or inaccurate.

The old species, described by color only, and when classification was in its infancy, cannot now be really appreciated except by personal examination. Nor can any words of condemnation be too strong for the modern practice of inserting these species, without such examination, under the strict subdivisions elaborated by recent science.

Such insertion must be made haphazard, and nothing is more common than to find one species registered in half a dozen genera, none of which suit it, or, if so, only by accident! For systematic writers now to rely on dried skins, is sufficiently objectionable: but their reliance on the old book descriptions is perfectly monstrous.

Mr. SWAINSON—*clarum et venerabile nomen*—has acknowledged with unusual explicitness that the examination of *fresh* subjects is, very generally, an indispensable condition of accuracy, and that, for all the higher purposes of science, an acquaintance with *habits*, as well as with structure, is required. Will it, then, be credited that, with almost all our recorded species calling for revision, and with our classification labouring, in vain, to advance per rudem indigestamque molem specierum, there is no sense on the part of Zoological associations at home of the necessity of any thing more than the collection of dried skins?

Such, however, is the fact; upon which I forbear, at present, from any comments, returning gladly to Mr. SWAINSON—whom any one would be proud to assist, if able; and, as I have some little practical experience of raptorial birds, and of the value of the generic characters assigned to them in books, I shall indicate what I conceive to be the diagnostics of some received genera.

AQUILINÆ. Genus *Pandion*.

Bill and head compressed. Gape narrow. Bill moderate, extremely rounded on the ridge, highly festooned; tomiæ scarpt and very trenchant. Brow not salient. Lores and cere almost nude. Nares rimiform, subtransverse, with the cere behind them membranous and free. Legs and feet spiculated, strong, compressed, nude, and reticulate. Toes nervous, cleft; the outer versatile with oblique grasp; the hind, very mobile. Talons highly falcated, nearly equal, compressed, rounded below. Wings exceedingly long, surpassing the tail; 3rd quill longest. Instances, *P. Vulgaris*, *P. Indicus*, nob. No. 715.

HALIAETUS. Sub-genus of *Pandion?*

Contradistinguished by a long bill, much more compressed on the ridge; by shorter, rounder wings, never surpassing and seldom equaling the tail, and which have the 4th and 5th quills sub-equal and longest; by wide, transverse nares of irregular form; by scaled tarsi and toes, in which moreover the spinous aculcation of *Pandion* is less developed, and the exterior and hind toes are less mobile; and, lastly, by talons less compressed and less rounded below—sometimes squared.

Types. *Haliætus Ichthyætus Horsfieldii, Plumbeus et Albipes*, nob. Nos. 10 and 3.

The bill of *Haliætus* is always longer and sharper on the culmen than in *Pandion;* but in some species, its cutting edge is as highly festooned as in *Pandion;* in others, it is as level as in *Aquila:* in some again the wings are considerably shorter than the tail; in others, equal to it.

Instances of the former peculiarities, *Ichthyætus et Plumbeus;* of the latter, *Albipes*. *Haliætus* is further distinguished from *Pandion* by a nude salient brow: but both genera are alike remarkable for the compression of the bill and head, as compared with *Aquila*, and also for the smallness of the gape.

The very long unfestooned bill of *Albipes* is accompanied by a wider gape, by wings equal to the tail, by great size, and by talons *perfectly* squared below.

If *Ichthyætus*, then, be the type of *Haliætus*—and no doubt it is—then *Albipes* is a separate type bearing the same relation to *Aquila*, as *Ichthyætus* to *Pandion*, and connecting *Aquila*, through *Haliætus*, with *Pandion*. This type I have provisionally named *Cuncuma*, from its native name. It is a fisher, but *not* exclusively so; and is remarkable, like the bird of *Washington*, for its thieftuous propensities*.

Pandion is the king of fishers, and a more beautiful instance of the adaptation of structure to habits than this genus exhibits, is not to be found in the whole circle of ornithology. The rimiform nares may be

* I make no allusion to birds which I am not personally familiar with; but I suspect that the American bird adverted to has a very strict resemblance to our *Albipes*, a resemblance including habits, size, and structure. If this be the case, it may be ranged by the side of *Albipes* under the sub-genus *Cuncuma*, of which the following are the characters. Bill long and void of festoon. Wings equal to the tail. Talons squared below. Size very great. There is a beautiful gradation of characters in these sub-genera, and a correspondent *modification of manners*, by means of which the type of the fishing eagles is linked with the type of the mammalivorous eagles.

closed by the lax membrane behind them so as to exclude the water: the compressed, spiculated, free toes, of which the outer fore may be turned quite back, and the hind almost forward, aided by the compressed cylindric and highly curved talons, are the very weapons to take fish with; whilst the immense wings enable the bird to quit his own element with impunity, and to bear off, from the bosom of the waters, fish of far greater weight than himself. Falcons trained to duck-hunting dare not suffer the water to touch their plumage, always quitting their grasp if the quarry can near it in the struggle. But *Pandion* will plunge dauntlessly into the deep, and will strike fish so large that they sometimes carry him under and destroy him, though he has nothing to forbear from a fish twice his own weight. In India the birds of this genus are not migratory: they breed in lofty trees overhanging large lakes, laying their eggs in April, May; and rearing two young, which usually quit the nest in June, July. The white-footed *Cuncum* (*Haliætus Albipes*) (which is a vastly larger bird) frequently robs the Indian *Pandion* of his spoil, just as the white-headed species of the West does the *Pandion* of that region. Those who have classed the *Brahmani Cheel* of India (*Haliætus Pondicerianus*) with the fishing eagles, may be safely said to know as little of the structure, as of the habits of that paltry Milvine bird; or else of the group with which they have associated it. True, *Pandicerianus* has a festooned bill*: but its feet are those of *Buteo* or of *Milvus*, without a trace of the peculiar structure of those organs in the piscatory eagles. Its chief food is insects, and its manner of questing similar to that of *Circus*. It feeds freely on dead fish and on other carrion in winter.

STRIGIDÆ.

Typical group. Disc and conch immense. Ears large and operculated.

Sub-genus *Strix*.

Bill longer than the head, straightened, shallow, feeble, with the

* The armed bill, however, insisted on as a pre-eminent mark of the *Raptores*, has as much reference to *insectivorous* habits as to more noble ones. And whenever the tooth or festoon of the bill is, however highly developed, rather sharp than strong, insectivorous habits may be safely inferred. These *sharp* processes of the bill remind one of the peculiar character of the teeth in the lesser insectivorous carnivora, such as *Herpestes*. Here also there is high development *without* concomitant strength: and if we look through the typical sub-family of the diurnal *Raptores*, we shall find the dentation of the bill most developed, in *one* sense, among the lesser insectivorous genera, such as our *Baza Elanus*, as well as the *Brahmani Cheel*, may be cited to prove that a *festooned* bill does not, per se, imply noble habits.

maxilla cut out by large nasal fossæ. Nares longitudinal and lunated. Valve of the ear definite, tetragonal. Wings long, feeble, exceeding the short and feeble tail: 2nd quill longest. Tarsi long, slender, partially implumose. External toe basally connected as in Falco. Central talon pectinated.

Type, *S. Flammea.*

Otus.

Head more or less egretted. Bill short, wholly arched on the culmen, high and deep at the base. Valve of the ear indefinite, confluent with the immense valvular disc, the opposite sides of which are connected over the ear passage by a membranous ligament. Wings long, feeble, scarcely or not at all exceeding the tail; 2nd quill longest; 1st strongly notched near the tip. Tarsi and toes short and plumose.

Types, *Otus Vulgaris et Brachyotus.*

Sub-typical group.

Disc and conch medial, perfect. Ears smaller, operculated.

Genus Scops.

Bill short, arched from the base, nostrils round, tumid. Head egretted. Ears simple, small*. Wings medial, sub-equal to the tail: 3rd and 4th quills sub-equal and longest. Toes feeble, nude, sub-depressed. Plumage soft and vermiculated. Size small. Habits insectivorous and nocturnal.

Instances. *Scops Sunia, Scops Lettia*†, *Scops Pennata*, nob. Nos. 64, 66, 721, respectively.

Aberrant group.

Disc and conch evanescent. Ears small and simple.

Noctua.

Bill short, arched from the base. Nostrils round, very tumid, sometimes tubular. Head smooth. Toes hairy, feeble, and sub-depressed. Wings short, scarcely exceeding the base of the tail; 4th quill longest. Tail slightly elongated, rounded. Plumage firm and lineated. Size small. Insectivorous and noctural.

Instances. *N. Cuculoïdes*, Gould; *N. Auribarbis; N. Tarayensis; N. Perlineata; N. Tubiger*, nob. Nos. 67, 63. 707, 486, respectively.

* Small and simple with reference to the *group*. The ears are, in fact, nearly twice as large as in the proximate genus *Noctua*, which I have ranged in the *aberrant* group.

† *Scops Lettia* is possibly the *Asio* auctorum: but there is no safe quoting of species from books. *Asio* has been made a *Scops*, an *Otus*, or any thing else, at the discretion of the *discreet!*

Scops seems to me to stand on the confines of the sub-typical group, leading to *Noctua* as among the first of the aberrant group. One is egretted, the other not; one has the plumage characteristically soft and lax, the other has the plumage, including the alar and caudal feathers, a good deal firmer. The wings of one scarcely surpass the base of the tail, those of the other reach nearly to its tip.

The disc of the one is nearly perfect, and the ears comparatively large, though simple. The disc of the other is very imperfect, and the ears much smaller. So also the eye and head*. The one has nude toes, and the other hirsute one. Lastly, a very maculate vest seems as common with *Scops*, as a lineated garb with *Noctua*. The size of both is small; both have an Otine bill with feeble feet; and both are nocturnal and insectivorous.

The above characters of known genera are, of course, mere suggestions, as emanating from one who has neither museum nor library at command. But, if practical experience be of any worth, they are suggestions which the skilful may take much advantage of. I suspect that plumage *very* soft, *moderately* soft, and more or less *hardened* or *firm*, might be ascribed, respectively, to the typical, sub-typical, and aberrant groups of the *Strigidæ* with safety and advantage.

I have great doubts as to the position of our *Urrua* and *Bulaca*. By the elongation and strength of the bill they are affined to the eagle owls; but the high development of the disc and conch, though far short of *Otus*, yet seems to indicate the position of these birds to be the sub-typical group. Though very similar in structure and size, one has the egrets, as well as subdiurnal habits and pale iris of *Otus;* but in this (*Urrua*) the valve of the ear is evanescent: whilst the other (*Bulaca*) with the smooth head and valved ear, has also the nocturnal habits and dark iris of *Strix*. The size of both is greater than that of either of these genera. In *Scops* the size and character of the disc and conch are very similar to those of *Urrua:* but the former is a small nocturnal and insectivorous bird; the latter, a large, semi-diurnal and mammalivorous one. *Bulaca* again, with something of the aspect, and with entirely the manners, of *Strix*, is sundered from *Strix*, toto cœlo, by the strength of its bill, the high gradation of its wings,

* The relative volume of the head amongst Strigine birds is more apparent than real. It is caused by the immense quantity of plumes protecting the conch when the ear has much of the peculiar family structure; and consequently this feature is quite as noticeable in *Otus* as in *Strix; because* in the former genus the ear is even *more signally* Strigine than in *the latter*.

and the superior length and firmness of its tail, as well as by its short and strong legs. In the last respect there is a close resemblance on the part of *Bulaca* to *Otus*; but the conch and disc are not half the size that they are in *Otus*; the conch is oval, and the definite form of the ear-valve is quite opposed to the character of this organ in *Otus*, agreeing more closely with *Strix*. The long and feeble wings and short and feeble tails of *Strix* and of *Otus*, are characters peculiarly their own: and they are united with, in the former, a bill so long and feeble, and, in the other, a bill so short and arched, that there is no mistaking the *combination* of these attributes in either genus. I know no Strigine type at all agreeing with *Strix* in the character of the bill, taking its *feebleness* and *length* together. But, it is a grievous mistake to suppose, with Cuvier, that *Strix* alone exhibits either elongation or straightness in this member: for, not only our *Huhúa* and *Cultrunguis* have a long and straightened bill; but these characters are distinctly, though less, developed in *Urrua* and in *Bulaca*.

The otine form of the rostrum (short, thick, and wholly curved) no doubt is very prevalent among the *Strigidæ*; since it is possessed in common by *Otus*, *Bubo*, *Scops*, *Noctua*, and *Ninox*. But the tumidity of the nares in the three last is not found in the first: and *Ninox* (not to mention its smooth head, divested of all Strigine characteristics save the size of the eye) is sundered wholly from *Otus* by its firm plumage, and by the length and *strength* of both wings and *tail*. In *Otus* the tail, though longer, is as feeble as in *Strix*; and in both these genera the wings, though long, have all the flimsiness proper to the family.

Noctua, by its firm plumage (including wings and tail) as well as by its depressed perching hairy feet, its evanescent disc, simple small ears, smooth head, and short arched bill with tumid round nares, makes the nearest approach to our *Ninox*. But shortness in the wing is the pre-eminent attribute of *Noctua*, whilst the very opposite is that of *Ninox*. In *Surniæ* the wings appear to be rather short, and the tail, though long, is extremely wedged. In *Ninox* alone have we wings and tail formed upon the Falconine model. And these peculiarities, taken in connexion with feet in which the insessorial character prevails almost over the Raptorial—just as it does in many of the little insectivorous Falcons—constitute our *Ninox* a signal type. Our *Cultrunguis* is equally conspicuous by its Pandionic feet and habits; and our *Huhúa* by its combination of aquiline attributes—the chief of which are pre-eminent size and strength, and a bill uniting length and straightness with enormous power. I am quite certain that both these birds

represent the sub-family of the eagles, in the aberrant group of the *Strigidæ*; and not merely so, but precisely, *Aquila* and *Pandion*. But as to the situation of *Urrua* and *Bulaca*, or as to their analogies, I am quite at a loss. Taking, however, as my guide the *medial size of the disc and conch*, I shall class them, for the present, in the sub-typical group, characterised as before; and the following generic characters may, I hope, serve to make them understood, in themselves and in their relations.

STRIGIDÆ.

Sub-typical group.

Genus URRUA, nob.

Bill sub-equal to the head, somewhat elongated, scarcely arched from the base, compressed, strong. Nares ovoid, transverse. Wings and tail somewhat elongated: wings moderately gradated, 3rd and 4th quills sub-equal and longest. Tail not bowed, even. Tarsi and toes plumose. Tarsi elevate, not feeble. Head egretted. Ears scarcely valved, oval, traversed by a membranous thong. Size considerable. Habits sub-diurnal. Dwells frequently in holes on steep bank-sides.

Type, *Urrua Cavearea*, nob. No. 57.

Genus BULACA, nob.

Bill sub-equal to the head, somewhat elongated, scarcely arched from the base, compressed, strong. Nares elliptic, transverse, tumid. Wings conspicuously gradated; considerably shorter than the tail; 5th and 6th quills longest and sub-equal. Tail sufficiently elongated, bowed. Conch ovoid. Legs and feet, short, strong, plumose. Head smooth. Habits nocturnal. Size considerable.

Type, *Bulaca Newarensis*, nob. No. 59.

It is quite out of the question to range *Urrua* with *Otus*, because of the greatly inferior size of the disc and conch; or with *Bubo*, because of the length of the legs; or with either, because the bill is decidedly, though not conspicuously, elongated and straightened. Equally impossible is it to range *Bulaca* with *Strix* or with *Otus*; because its disc, though perfect, is not larger than in *Urrua*; because its bill is (like that of *Urrua*) stronger and shorter than that of *Strix*, longer and less arched than that of *Otus*; and because its wings have characters quite opposite to those of either genus.

Urrua has the sub-diurnal habits, the pale iris and the egrets of *Otus*; *Bulaca*, the nocturnal habits, the dark iris, and the smooth head of *Strix*. In both the orifice of the ear is oval, but large ($1\frac{3}{8}$ inch long). In *Bulaca* it has a large distinct valve: in *Urrua*, scarcely any. In neither is there any appearance of the long circular denuded line

defining the course of the disc in *Strix* and *Otus*, and seeming, as it were, to lay bare the whole head.

This organ, both in size and character, is *essentially* mediate in these birds, between the typical structure as seen in *Strix* and *Otus*; and the aberrant structure, as exhibited in *Noctua*, *Ninox*, *Huhúa*, and *Cultrunguis*.

The following comparative measurements, in English inches, may help the curious to appreciate the value of those perplexing but necessary terms, *long* and *short*, as applied to bills, tails, and legs.

	Length of the bird.	of the tail.	of the tarsus.	of the bill.
Strix,	14⅓	5¼	3¼	1¾
Otus,	14½	6	2	1¼
Urrua,	22	9¾	3½	1⅞
Bulaca,	22	9¾	2¾	1⅞
Scops,	9½	3¾	1⅛	⅞
Noctua,	9½	4	1⅛	⅞
Ninox,	12	6	1⅜	⅞
Huhúa,	30	12	3⅛	2⅜
Cultrunguis,	24	9¾	3⅞	2⅛

P. S. Since the above paper was composed, I have received, from the lower hills, a fine specimen of the *Strix Coromandra* of Latham. With the size it has all the characters too, of our *Urrua*, except in the legs, the tarsi being lower, and the toes scopine but stronger. The opening of the ear is about one inch, long, ovoid, and not valvular, though the membranous edge be more or less free all round it. I know nothing yet of the *habits* of this bird. If they agree with those of *Urrua*, it may form a species of this genus or sub-genus; and its toes are not absolutely nude, though nearly so. But it seems to be an osculant species leading to *Scops*. The wings and tail are both somewhat elongated, and sufficiently firm, though the general plumage be remarkably soft. The wings are not much short of the tail, and they have the 3rd quill longest, the 4th nearly as long; the first and second, moderately gradated. The toes, which are longish and not feeble, are remarkable for a softly papillose and flattish sole. To the external one there is a vague basal membrane; and the hind is stronger than usual. The talons are sufficiently elongated and acute; the inner and central, the outer and hind, being respectively equal.

The nostrils are nearly round and somewhat tumid: the bill, like that of *Urrua* and *Bulaca*, combines strength with a tendency to elongation and straightness, not noticeable in *Otus*. My bird is a mature female, 21 inches long, of which the bill is 1¾, and the tail 9⅛, the tarsus is 2¾, and the central toe 1⅝.

VI.—*Observations of the Magnetic Dip and Intensity at Madras. By* T. G. TAYLOR, *Esq. H. C. Astronomer.*

Notwithstanding the value which has of late years been attached to observations of the Magnetic Dip and Intensity, I may, I believe, safely state, that the whole of British India has failed to put on record a single good set of experiments to this end. With a view to supply this deficiency for *Madras*, I have availed myself of the loan of a very excellent dipping needle, the property of Captain DRINKWATER, of His Majesty's ship *Conway;* and of two magnetic intensity needles which were brought out by the same officer, and are the property of Captain JAMES CLARKE ROSS, R. N. The dipping needle, which was constructed on purpose for the *Conway*, differs, I believe, in no respect from the ordinary construction, save that it is one of the best instruments I have met with, and, as far as I can see, absolutely faultless. The observations for Dip are as follows.

Observations for Dip made at the Madras Observatory, situated in Long. 5h. 21m. 7s. 8 East of Greenwich, and Lat. 13° 4′ 8″. 8 N. on the 26th April, 1837.

With Needle marked No. 1.

Face of Instrument E 2st.

No.	A.	B.	No.	A.	B.
1	7° 26′	7° 28′	2	6° 16′	6° 14′
3	7 6	7 4	4	6 12	6 8
5 Inverted the axis,	7 24	7 17	6	6 4	6 8
7	7 30	7 24	8	6 16	6 22
	Reversed the Poles.				
9	7 28	7 22	10	6 34	6 38
11	7 12	7 7	12	6 16	6 21
13	7 16	7 24	14	6 24	6 28
15	7 26	7 23	91	6 27	6 33
Mean,	7° 21′ 0″	7° 18′ 37″		6° 18′ 37″	6° 21′ 30″

Needle marked No. 2.

1	7 31	7 20	2	7 2	6 38
3	7 31	7 42	4	7 8	6 58
5 Inverted the axis,	7 42	7 25	6	6 55	6 14
7	7 50	7 30	8	6 45	6 55
	Reversed the Poles.				
9	7 24	7 6	2	6 0	6 21
11	7 26	7 4	4	6 10	6 28
13	6 34	6 44	6	6 15	6 0
15	6 34	6 43	8	6 23	6 4
Mean,	7 19 0	7 11 45		6 34 45	6 34 45

And taking the general mean, we get the true Dip

with Needle No. 1 6 49 56 No.

ditto ditto ,, 2 6 55 4

Mean, 6 52 30

N. B. The numbers 1, 2, 3, &c. exhibit the order in which the observations were made. During the present century, I cannot find that any observations for Dip have been made at *Madras*, but there is one result on record dated 1775, when Abercrombie found it to be 5° 15′ N.; if this result can be trusted, it would appear that the Dip is on the increase at the rate of 1′ 34″ in a year.

With regard to the needles employed for the magnetic intensity, it may be necessary to state, that they are constructed after the model of that of Professor Hansteen. The needles are cylinders, $2\frac{1}{2}$ inches long and .3 inch in diameter, save that the ends are abruptly sharpened to a point; these needles are freely suspended on their centres by a few filaments of unspun silk, which are hooked on to a brass stirrup, moveable upon the needle; by which means a perfect adjustment to horizontality can be effected; the needle thus suspended is enclosed in a rectangular glass box immediately over a divided circle, from which the arc of vibration can be read off and the number of oscillations counted. The zero of measure here employed, is the time of performing 100 vibrations at a temperature of 60°, commencing with an arc of 20° and ending at from 2° to 4°.—If these measures could be observed to ultimate accuracy, it would be worth while to reduce the times of vibration under these circumstances to the times of describing an infinitely small arc, as has been done by Hansteen, and on account of buoyancy, to a vacuum; but since such is not the case, the result will be obtained to all useful accuracy by supposing the correction common to each set of observations, by which the reductions, which are rather operose, are avoided: the reduction to a temperature of 60° is effected by applying the correction, 0,00017 t. (where t represents the time of performing 100 vibrations);—a formula which is derived from experiment. The two needles used in the following observations are distinguished from one another by a sign × on one of them. This needle in *London* at a temperature of 60° performed 100 vibrations in 442,76 seconds of mean time, whereas the other needle performed 100 vibrations under the same circumstances in 461,96 seconds; the former needle is further distinguished from the latter from its having been long in use in England, and as having exhibited a remarkable degree of steadiness in its magnetism during the late magnetical experiments instituted in Ireland under the auspices of the British Association; added to which, these needles are calculated to excite a more than ordinary degree of interest from the circumstance of their having been employed by Sir John Ross in the perilous North Polar Expedition, from which he has lately so fortunately returned. The observations at *Madras* are as follows.

No. 3, Private mark ×.

1837.	Arc.	Ther.	Vib.	Mean Time. h.	m.	s.	Interv. s.		Mean Int. s.
April 30th.	20° 0	88.0	1	0	43	49.4	302.2		301.57
	12 45	——	101		48	51.3			
	8 15	——	201		53	53.1	301.5		
	4 0	——	301		58	54.1	301.0	cor. for temp. 1.43	
									300.14
Another set.	20 0	88.0	1	1	1	49.0	302.2		301.60
	12 45	——	101		6	51.2			
	8 15	——	201		11	52.6	301.4		
	4 15	87.8	301		16	53.8	301.2	cor. for temp. 1.43	
									300.17
May 3rd.	20 0	87.0	1	0	45	37.7	302.5		301.97
	12 45	——	101		50	40.2			
	8 30	——	201		55	42.1	301.9		
	5 0	——	301	1	0	43.6	301.5	cor. for temp. 1.38	
									300.59

No. 3, not marked.

				h.	m.	s.	s.		s.
April 26th.	20° 0′	85.2	1	3	43	6.1	311.0		310.70
	12 30	——	101		48	17.1		cor. for temp. 1.31	
	9 0	——	201		53	27.5	310.4		309.39
April 30th.	20 0	87.8	1	1	25	17.3	312.1		311.50
	11 45	——	101		30	29.4			
	7 30	——	201		35	40.7	311.3		
	4 0	87.3	301		40	51.8	311.1	cor. for temp. 1.40	
									310.10

or we have for the time of performing 100 vibrations at the temperature of 60° Fahrenheit at *Madras*.

Needle 3, ×	Needle 3.
s.	s.
300.14	309.39
.17	310.10
.59	
Mean, 300.30	Mean, 309.74

If h and h' represent the magnetic intensities at any two places, and T and T′ the times of performing 100 vibrations at those places, then we have

$$\frac{h}{h'} = \left(\frac{T'}{T}\right)^2$$

applying this, the horizontal magnetic intensity for *Madras* (that at *London* being assumed = 1.) becomes

	s.
By Needle No. 3, ×	2,1738
Ditto ditto No. 3,	2,2245

With a view to compare theory with practice, we might now compute the number of oscillations which No. 3 × ought to make at *Madras* from the observed number in *London*; thus, assuming the Dip for *London* to be 69° 10′ N. the formula becomes

$$\left\{3 + \sec.^2(69^\circ\ 10')\right\}^{\frac{1}{2}} : \left\{3 + \sec.^2(6^\circ\ 52'\ 30'')\right\}^{\frac{1}{2}} :: \overline{462,76}^{\,2} : T^2$$

performing the computation T = 344,87 differing to the amount of 44,57 seconds from the observations. This difference between theory and observation, is but one of many instances which have from time to time occurred in the infant state of a science. Observation has led us to a theory, and then again has shewn the incompleteness of such theory. In the case of Magnetism, we have long since been prepared to expect that local causes might considerably interfere with its established laws; since one station (the island of *Teneriffe*) has already exhibited some singular anomalies, both in respect to the Dip and Intensity. Under these circumstances it is much to be wished that observations could be multiplied in various parts of India, whereby the law of variation from theory may be detected;—and how is this to be accomplished? My answer is ready:—Let any gentleman who is disposed to undertake a set of magnetic intensity experiments signify his intentions; and I shall have great pleasure in forwarding to him, free of expense, a magnetised and compared needle, provided that I am favored with a copy of the results. In anticipation that there will be several gentlemen disposed to forward this inquiry, I am now preparing several needles for use. All that is necessary is, that the person applying for a needle should be in possession of a good clock or chronometer, and has the means of ascertaining its daily rate.

Madras Observatory, 9th May, 1837.

Note.—We shall be most happy to promote the author's views by making a series of experiments with his needles in Calcutta, and then distributing them to friends in the interior. Of the dip we have a few records, (see Proc. As. Soc. for May) Major B. Blake also brought from England an adjusted intensity needle, but we have not yet been favored with his observations.—Ed.

VI.—*The Legends of the Saurashtra group of Coins deciphered.* By James Prinsep, *Sec. As. Soc.*

Those who would deprecate the study of old coins as a useless and uninteresting waste of time and ingenuity,—and there are such we fear even among the readers of this journal,—frequently mistake the means

for the end, and suppose us to be enamoured of the very defects of the barbarous specimens of ancient art we seek out with such ardour, rather than give us credit for being impelled by the desire of looking through them at the history of the times they faintly but certainly pourtray. Twice has our small band of collectors been enabled to oppose a triumphant reply to such sceptics even with the unpromising materials of purely Indian relics, without counting the splendid but more natural harvest in ancient *Bactria*. The dynasty of the Guptas in central and eastern India, and that of the Buddhist rájas of *Ceylon*, form two unequivocal lines of history developed, or confirmed, by the unlying evidence of coins. I am now happy in being able to produce a third series for the west of India, equally well filled as to names, and of greater interest than either of the previous discoveries, on several accounts, as will presently be manifest.

I have given the name of *Saurashtra* series to the coins depicted in Plate XLIX. of Vol. IV. because they have principally been found at *Mandivee, Puragarh, Bhoj*, and other ancient towns in *Cutch, Cattywar*, and *Guzerat*, the *Surastrene* of the Greeks, which comprehended from the *Sindh* or *Indus* to *Barugáza* (*Baroach*) on the confines of *Ariake*, or India Proper, and which cannot but be identical with the *Saurashtra*, of Sanskrit authorities*. The specimens before me when engraving the plate alluded to, were not very distinct, and I could not then make out more than a few of the letters, which were seen at once to belong to a peculiar form of ancient Nágarí.

Success in other quarters brought me back to the promising field of *Saurashtra*, made more promising by the accession of some fresh coins from Mr. WATHEN of *Bombay*, and Captain BURNES, whereon the legends were more complete.

While thus engaged, I received from Captain HARKNESS, Sec. Roy. As. Soc. along with a copy of the Society's Journal, No. VI. (which also contains a notice by Professor WILSON of one coin of this group, but without decipherment†) a couple of beautifully executed plates of a fine collection of these same coins in the possession of Mr. STEUART, who made a tour through India a few years since. The plates appear to have been executed in *Italy*; and as no explanation occurs, I

* See preceding note on the birth place of IXWAKU, page 349.

† Professor WILSON has inadvertently assumed in his note, on my authority, that these coins are known by the name of *Gadhia paisa*, or ass-money. It was not to this description, but to a very degenerate descendant of the Indo-Parthian coinage, generally of copper, that Captain BURNES stated the name to be applied.—(See my former paper, Jour. Vol. III. p. 687.)

presume they have been circulated to the various Oriental Societies in hopes of getting the legends deciphered. Encouraged and aided by this accession of materials, I proceeded, according to the plan that succeeded so well with the Bactro-Pehlevi inscriptions, to separate and analyse the conformable portion or the titles common to all the coins, and afterwards to classify the unconformable portion, which of course would include the proper names.

In this manner I was soon fortunate enough to discover a key to the whole in the value of one or two anomalous looking letters which had hitherto deceived me by their resemblance to members of other ancient Sanskrit alphabets. I must acknowledge some assistance from Mr. WATHEN's Sindhí grammar, where having found the absence of vowel marks in the modern alphabet of the country, I was not unprepared to find the same omission in the more ancient one. Another preparatory step was derived from the TREGEAR legends of last month's plate, ending in *Mitasa*, which I ventured to construe as the corrupted or *Páli* mode of expressing the Sanskrit possessive case *Mitrasya*. A similar र was perceived following पुत्र or *putra*, which left little doubt that the word was पुत्रस, for पुत्रस्य " of the son," which, by the idiom of the language, would be the final word of the sentence, and would require all the preceding members of it to be in the genitive case.

The letter ज (or *j*) occurred in the body of one or two of the legends in its simple state, whereas in the initial word, which could not but be *rája*, it was prolonged below, shewing that another letter was subjoined, while sometimes the visarga followed it.—This could be nowise explained but by supposing it the possessive case of राजा, or राज्ञः *rájneh*, the double letter being not at that early date replaced by a compound symbol.

The same observation will apply to all the other double letters, *mn*, *tr*, *dr*, *sv*, *shv*, which are in this alphabet made by the subjunction of the second letter without diminution. Hence the peculiar elongation of many of the letters, which was at first thought characteristic of the whole alphabet, but it turns out to belong only to the letter *r*, which is thus distinguished from the *n*, *i*, and *h*.

The second word of the title I read क्रत्रिमस, for क्रत्रिमस्य *Krítrimasya*, genitive of *Krítrima*; which is translated in WILSON's dictionary " made, factitious, an adopted *son* (for *Krítrima putra*)."—The latter sense was inadmissible, because it so happened that the name of the actual father was in every case inserted, and the same title was also applied to him. The only manner, therefore, in which the term could be rendered was by " elected"—" adopted"—by the people, or by the

feudal chiefs of the country; a designation entirely new in Indian numismatics, and leading to a highly interesting train of reflection, to which I must presently recur. Sometimes the epithet *Mahá* is affixed—not to rája, but to *Kŕŭtrima*, as *Rája mahá Kŕŭtrima*, the 'great or special elected king'—as if in these cases he had been the unanimous choice of his people, while in the others he was installed merely by the stronger party in the state.

In every instance *but one*, the rája is stated to be the son of a rája; and it is quite natural to expect that a prince, unless he were very unpopular, would have influence to secure the succession in his own family. In the case forming the exception to this rule, the rája is the son of a *Swámin* or *Swámí*, a general term for bráhman or religious person. I have therefore placed him at the head of the line, although it does not follow that in an elective government the regular succession may not have been set aside in favor of an influential commoner.

Among all the coins hitherto examined nine varieties only have been discovered. Of these several can be traced from father to son in regular succession.—Others again spring from the same father, as if brothers had succeeded, in default of heirs direct, or from voluntary supercession; but we know that in Indian families the same names frequently recur in the same order of filiation; so that unless accompanied by a date it is quite impossible to decide whether the individuals are the same in every case of similar names.

The features on the obverse might serve as a guide in many cases, for they (as I have before remarked) are executed with a skill and delicacy quite Grecian; but it will be seen below that I doubt their representing the individual named on the reverse.

I have lithographed in Plate XXIV. the several varieties of legend, as corrected and classified, after careful examination of Mr. STEUART'S plates, with all the coins in our respective cabinets, as well as the sketches I have been favored with of others by Mr. WATHEN. I have not time to engrave the coins themselves, of which indeed the former plate will give a clear idea, for they are all the same in size and appearance, varying a little in the countenance of the prince. Their average weight is about thirty grains, agreeing in this respect with the *korees* mentioned by HAMILTON as struck in *Cutch*, four to a rupee, by the Raos and Jams of *Noanagar*, with Hinduí characters*.

Legend, No. 1. Of this there are four examples in Mr. STEUART'S plate. I had one from Mr. WATHEN†, which passed into Captain CUNNINGHAM'S possession by exchange.—Adding the mátras or vowels,

* HAMILTON'S Hindostan, I. 654. † Found by Captain PRESCOTT in Guzerat.

and correcting the possessive termination, the legend will be in modern character,

राज्ञ क्षत्रिमस्य रुद्रसाहस्य स्वामि जनदमपुत्रस्य

Rajna kritrimasya Rudra Sahasya, Swámi Janadama-putrasya.

in English, 'coin) of the elected king RUDRA SÁH, son of SWÁMI JANADAMA.' The letter beginning the word *Swámi* in the majority of Mr. STEUART's figures, is an ञ्च, in lieu of a स्व. In one of his, and in mine (or rather Captain PRESCOTT's coin), the orthography is correct. There may be a little doubt about the *n* in *Janadama*, which is rather indistinct, but I think the dot at the foot of the line decisive.

Legend, No. 2. Of this there are likewise four coins engraved. We have none in *Calcutta*. The words run:

राज्ञ क्षत्रिमस्य आगदम्न राज्ञ क्षत्रिमस्य रुद्रसाह पुत्रस्य

Rajna kritrimasya Agadamna, rajna kritrimasya Rudra Sáh putrasya.

'Of the elected king AGADAMA, son of the elected king RUDRA SÁH.'

The simple title, *rája*, of the father makes it probable that he is the preceding prince, whose son therefore succeeded him under the same system of election.

Legend, No. 3. Two coins in the STEUART collection:

राज्ञः क्षत्रिमस्य वीरदम्नः राज्ञमहा क्षत्रिमस्य दमसाहस्य पुत्रस्य

Rajneh kritrimasya Vira damneh, rajna mahá kritrimasya Dama Sáhasya putrasya.

'Of the elected king VI'RADAMA, son of the great elected king DAMA SA'H.'

In these examples we have the correct orthography of the genitives with one superfluous स्य attached to the penultimate *Sáha*,—which being connected with the word *putrasya* did not grammatically require the affix. DAMA SA'H, the father, is most probably a different person from the AGADAMA of the last coin. His title is more important, though that of his son again falls to the former level. We have as yet no coins of DAMA SA'H himself, though by this happy insertion of the 'fathers' we obtain two names with each specimen.

Legend, No. 4. Four coins in STEUART's plates—none in *Calcutta*:

राज्ञ महाक्षत्रिमस्य रुद्रसाहस्य राज्ञः क्षत्रिमस्य वीरदम पुत्रस्य

'Of the great elected king RUDRA SA'H, son of the elected king VI'RADAMA.'

Nothing invites remark in the orthography of this legend but the insertion of the visarga in one place and its omission in another. RUDRA SÁH is a direct descendant of the last rája.

Legend, No. 5. Two coins in the STEUART list—two in my cabinet, one in Captain CUNNINGHAM's:

राज्ञः क्षत्रिमस्य विश्वसाहस्य राज्ञ महाक्षत्रिमस्य रुद्रसाह पुत्रस्य

'Of the elected king VISWA SÁH, son of the great elected king RUDRA SÁH.'

Another regular succession. It is curious that the visarga is *not* inserted at *random*, but, where it has been once given, the engraver seems to have considered it necessary to repeat it—as he does also to conform to the modification of the letter *j* in *rája*.

Legend, No. 6. Three STEUART coins, one PRINSEP (from BURNES' collection), and one in Dr. SWINEY's cabinet :

राज्ञ महाक्षत्रिमस्य अचिदम्म राज्ञ महाक्षत्रिमस्य रुद्रसाह पुत्रस्य

'Of the great elected king ATRIDAMA, son of the great elected king RUDRA SÁH.'

Here we have, in all probability, a second son of RUDRA SÁH, through failure of heirs male to VISWA SÁH. I write ATRI for euphony as the most likely disposition of the vowels, none being expressed but the initial *a*, which, as in the modern Sindhí, serves for all vowels equally well.

Legend, No. 7. Including Nos. 9 to 12 of the STEUART plate; two in my cabinet, one in Captain CUNNINGHAM's, and one in Dr. SWINEY's :

राज्ञ क्षत्रिमस्य विश्वासाहस्य राज्ञ महाक्षत्रिमस्य अचिदम्म पुत्रस्य

'Of the elected king VISWA SÁH, son of the great elected king ATRIDAMA.'

This second VISWA is shorn of his father's distinction, *Mahá*. He does not appear to have left a son to take his place, being in the same predicament (as far as our information goes) as his namesake the son of RUDRA.

Legend, No. 8. Three coins, 25, 26 and 27 of STEUART, and two in my series—one lately received from Mr. WATHEN, and perfect in its circle of letters :

राज्ञ मद्दा क्षत्रिमस्य विजय साहस्य राज्ञ महाक्षत्रिमस्य दमसाह पुत्रस्य

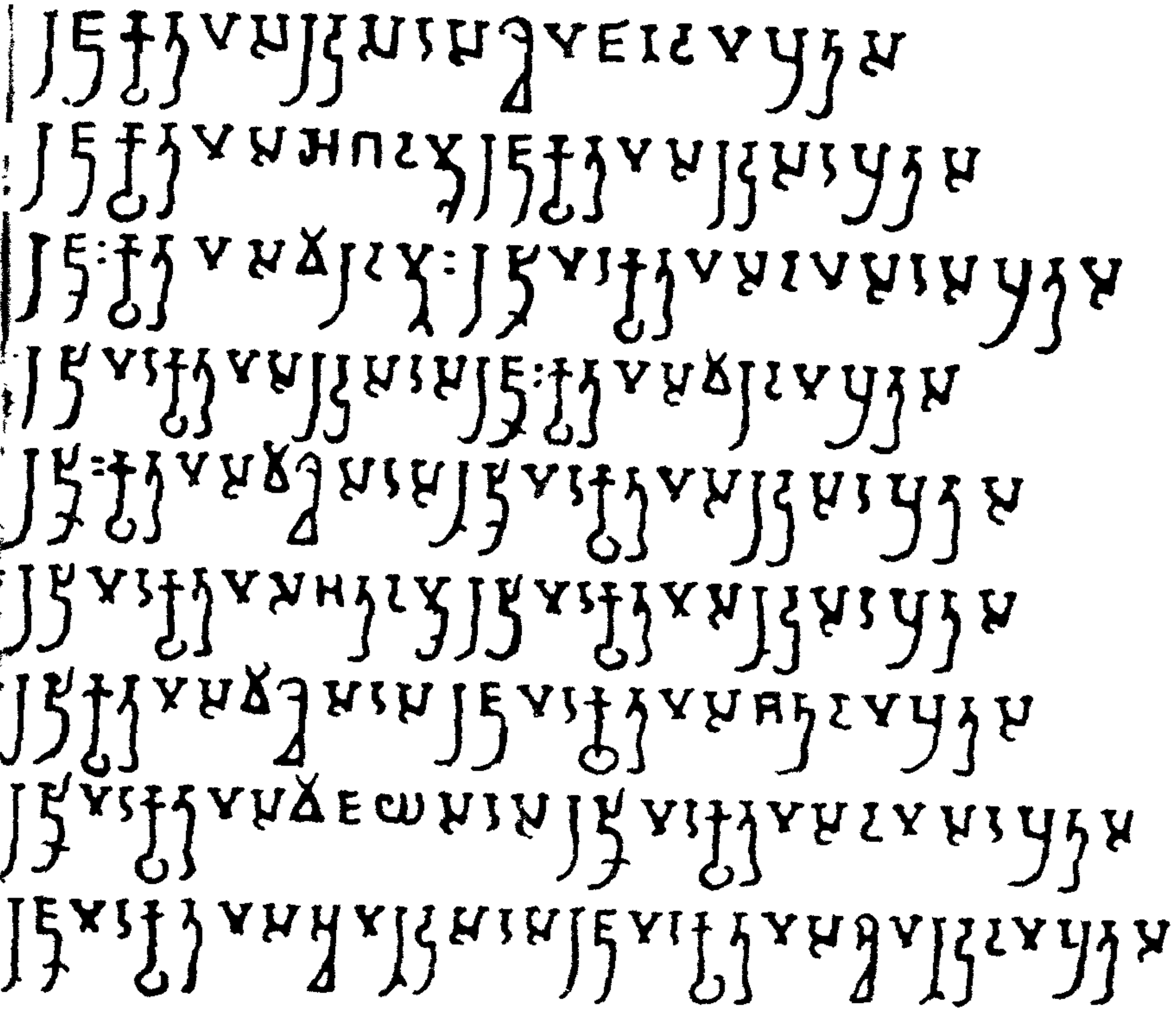
'Of the great elected king VIJAYA SÁH, son of the great elected king DAMA SÁH.'

This *raja* is evidently out of place; being a son of DAMA SÁH, he should have come before VI'RADAMA, who had a son. I *did not* perceive the mistake until after the plate was lithographed.

Legend No. 9. Of this there is only one specimen in the STEUART collection, to which I am able to add two. Col. TOD's plate in the Roy. As. Soc. Trans. contains one. The inscription exceeds all the rest in length :

राज्ञ महाक्षत्रिमस्य स्वामिरुद्रसाहस्य राज्ञ महाक्षत्रिमस्य स्वामिरुद्रदम पुत्रस्य

Legends on the Cutch coins with the ⁂ symbol.



Legends on the obverse.

5 [illegible]

8 [illegible] ...ΠΟΠΙΣΥΛΑΟΥ....

9 [illegible] in another [illegible]

3 [illegible]

6 [illegible]

7 [illegible]

Central symbol of the Reverse



Similarly between the Greek and Sanscrit Alphabets

Greek		Sanscrit	
A	A	H	H a
B	B	O or A	va
Γ	Γ	٦	Π
Δ	D	ɑ	ɑ da
E	E	?	ɜ E
Z	Z	N	? Z
H	H	?	Π .
Θ	Θ	⊙	⊕
I	I	·|·	.
K	K	+	+
Λ	L	↙	↵
M	M	X	X
N	N	⅃	⅁
O	O	↻	ω
Π	Π	Ш	Ш
P	P	J	J
Σ	Σ	E	E
T	T	⅄	⅄
Υ	Υ	⅄	ω
X		+	

Finsch lith.

'Of the great elected king SWÁMI RUDRA SÁH, son of the great elected king SWÁMI RUDRA DAMA.'

These two names stand insulated from all the rest, and the only test by which we can attempt to supply them with a fit position in the list, is the form of the letter ग्र which is decidedly of the earlier model. These two kings may therefore come conveniently into the break after AGADAMA, the second on our list.

We may now proceed to sum them up in the order thus conjecturally determined.

Elected Sovereigns of Cutch, (Saurashtra ?)

1. RUDRA SÁH, son of a private individual, SWÁMI JANADAMA.
2. AGADAMA, his son.

   (Here the connection is broken.)
3. SWÁMI RUDRA DAMA.
4. SWÁMI RUDRA SÁH, his son.

   (Here the connection is again broken.)
5. DAMA SÁH, of whom no coins are extant.
6. VIJAYA SÁH, his son.
7. VI'RA DAMA, another son of DAMA SÁH.
8. RUDRA SÁH, son of VI'RA.
9. VISWA SÁH, son of RUDRA.
10. ATRIDAMA, also son of RUDRA.
11. VISWA SÁH, son of ATRIDAMA.

Thus we have eleven kings, with only two breaks in the succession, developed by this very interesting series of minute silver coins. Eleven kings, at the usual average of eighteen years per reign, will run through a space of just two centuries. Yet where need we seek for a single trace of such a dynasty in any of the works of the Hindus, when of the Guptas reigning in the central provinces the memory is but faintly shadowed in some of the spurious Puránas? It would be more unnatural to hope for any allusion to a remote kingdom of the west like *Cutch*, in the books of the bráhmans; and unless we can find something to the purpose in the numerous inscriptions from *Girnar* and *Junagarh*, we may, as far as the Hindus are concerned, but have added a barren list of names to the numerous pedigrees already collected by TOD and others, with the advantage however, always considerable, of their being entitled to perfect confidence.

From the Persian historians here and there may be picked up an incidental notice, of great value, regarding the internal affairs of India, but the names are so changed and confounded with titles that it is sometimes hard to recognize them. One of these notices quoted

by Colonel POTTINGER in his history of Sinde* seems to throw an important light upon the point before us. After noticing the utter absence of any information on the dark age between the Macedonian expedition and the incursions of the Musulmans, this author says—"The native princes are not mentioned by name in all the manuscripts I have perused, until the time of the celebrated KHOOSROO (NOURSHERWAN) king of Persia†, who sent a large army and ravaged the western frontier of SASEE RÁJA'S dominions; which are described, *including* his tributaries, to have extended on the north to the present provinces of *Kashmeer* and *Kabool*; southward to *Surat* and the island now called *Diu*; westward along the sea coast to *Mukran*, and eastward to the provinces of *Márwár, Bikaneer*, &c."

Colonel POTTINGER states that the rájas name was SUBEER SINGH; but this may be the learned mode of expanding the original *Sa-See* into a genuine Sanskrit name. He was killed and his country plundered, but after the enemy had retired with their spoil, two princes of the same dynasty succeeded and reigned with great vigour and equity, repairing the forts of *Sehwan, Moo, Oocha, Narain koth*, &c., which had fallen to decay under their peaceful progenitors. The second prince, resigning himself to sensual pleasures, left the conduct of affairs to his minister, during whose illness a young bráhman of his office, named CHUCH, having occasion to visit the king in the seraglio, was seen and loved by the queen, and on the death of the king they married and brought about a revolution which placed him on the throne. "Such," says the historian, "was the close of the race of Rája SASEE, which had governed the kingdoms of *Sinde* for upwards of two thousand years; whose princes at one period received tribute from eleven dependent kingdoms, and who had set the threats of the greatest monarchs of the world at defiance."

Now the word *Sasee*, the general name of the royal line, has a much greater affinity with *Sáha* (genitive, *Sáhasa*) than with SUBEER SINGH—and this name we find borne by seven out of the eleven princes whose names have been thus fortunately preserved. Many other considerations might be adduced in favor of their identity. A commercial maritime kingdom seated in *Saurashtra* and at the mouth of the *Indus*, would naturally extend its sway up the valley of that river and its branches. From its wealth and liberal form of government, it would be stable and powerful, especially under a tributary treaty (in general

* POTTINGER'S Travels in *Beloochistan*, p. 386.

† NOURSHERWAN flourished about the middle of the sixth century. He was contemporary with the Roman Emperors JUSTINIAN and JUSTIN.

punctually performed) with the great monarch of *Persia*, the chief enemy capable of doing it injury. The antiquity assigned to this Sindian, or early Indian kingdom, further agrees with the tradition of IKSWAKU's residence, and the migration of his sons eastward, and with all we have remarked (in a previous paper) regarding the origin of the commercial classes throughout modern India.

But, if the dynasty of the *Sáha* or *Sasee* rájas, of which we may now fix the termination towards the close of the sixth century, extended backwards for two thousand years or even a quarter of that period, we should find some mention of it by ALEXANDER's historian, or by his namesake the commercial ARRIAN, who visited this very kingdom in the second century of our era. The elder ARRIAN affords but little to aid us. In the descent of the *Indus*, some petty chiefs, as MUSICANUS, OXYKANUS and SAMBUS are encountered and overthrown; but we hear of no paramount sovereign in *Patalene*. Indeed from the pains taken in rendering *Pattala* more habitable by digging wells, and inviting back the fleeing population, it might be argued that it could not have been a place of much importance prior to ALEXANDER's visit.

The capital of the province had changed in the second ARRIAN's time, to *Minágara*, "the residence of a sovereign, whose power extended as far as *Barugáza* in *Guzerat*. The government was in the hands of a tribe of Parthians divided into two parties; each party as it prevailed chose a king out of its own body, and drove out the king of the opposite faction: *συνεχῶς αλλήλους ἐκδικούντων**."

Dr. VINCENT, the learned commentator on the Periplus, seems to hesitate in believing this assertion of ARRIAN that the government of the *Sindh*, *Cutch* and *Guzerat* province, was in the hands of a tribe of the Parthians, "*Βασιλεύεται δέ ὑπὸ Παρθων*—" "If," says this author, "the governing power were Parthians, the distance is very great for them to arrive at the *Indus*; may we not, by the assistance of imagination, suppose them to have been Affghans, whose inroads into India have been frequent in all ages. That the government was not Hindu is manifest, and any tribe from the west might be confounded with Parthians. If we suppose them to be Affghans, this is a primary conquest of that nation, extending from the *Indus* to *Guzerat*, very similar to the invasions of MAHMU'D the Ghaznavide†."—"If" (we may here continue) for Affghans in this passage, we substitute the Mithraic races of *Seistán* and *Ghazni*, by whatever name they were known at the time, we find confirmation of such a line of invasion both in Mr. MASSON's remarks—in our Indo-Sassanian coins, and in ARRIAN; for the fire worship would

* VINCENT, *Periplus* of the Erythrean sea, II. 385. † Periplus, II. 585.

be quite ground enough for his classing the ruling race under the general term of Parthian*.

At any rate, as our author says, the ruling power was not then Hindu, and therefore the dynasty of the *Sáhas*, in which we find the genuine Hindu names of *Rudra*, *Viswa*, *Vira* and *Vijaya* could not yet have sprung up. Thus we have a limit on either side, between the third and the seventh century to assign to them, and we have names enough to occupy one half of that space. The family name of SÁH, or SÁHU, is not Sanskrit†, but it is very extensively used in the vernacular dialects. Half of the mahájans of *Benares* are named *Sah*‡, and the epithet evidently implies 'merchants,' for we find the same root in the *sahukár* (soucar) agent; *souda*, *soudágar*, trade, trader; and perhaps in the Persian word *sood*, interest. One branch of this western tribe *Sáh*§ has been elevated to royalty in the present occupants of the throne of *Nipal*: the *Garkhálís*, who overturned the *Malla* line in 1768, having confessedly migrated from *Udayapúr* close upon the borders of our supposed Sindian kingdom, and settled in the hilly district of *Kemaon* about two centuries anterior to their conquest of Nèpal Proper.

The learned memoir of Professor LASSEN on the Pentapotamia furnishes us with a proof that the *Sáhs* of *Sinde* and *Guzerat* were well known at the time the seventh chapter of the Mahábhárata was written for, when describing with all the acrimony of those who had suffered from their aggressions, the origin and habits of the *Bahlics* or Bactrians of the *Panjáb* or *Panchanada*, in the 44th verse we find the following words put into the mouth of CARNA:

* By *Parthians*, according to MOSES of Chorene, should be understood the *Palhavis*, or *Balhavis*, or people of *Pahla*, *Balha* or *Balcha*, the *Balika* or *Bahika* of the Sanskrit, and the *Bactria* of the Greeks: whence were derived the *Pehlevi* dynasty and *Pehlevi* writing of Persia; and the *Palhawans* of their more ancient poetry. An explanation so comprehensive and simple, that it seems curious it should ever have been disputed by the learned. Is it not also highly probable that the *Balabhi* kings, and their capital the *Balabhipura* of Gujerat, should originally have referred to a *Pahlavi* dynasty holding or re-establishing their sway in this province? The Sanskrit name of the town according to TOD is *Balika-pura*, and of the kings, *Balika-rai*. We must find their coins and decipher their inscriptions ere we shall be competent to enter more fully on the subject.

† सह or सहदेव *Saha deva* is however the name of the youngest of the five Pándava princes, and might be accepted by some etymologists as the original of a patronymic, *Sáhu*. सह also signifies "increase, addition;" but साहु is generally looked upon as the root of *Sáhu* the mercantile name.

‡ GOPAL DAS SAH, GOAL DAS SAH, &c. &c.

§ I perceive also in a manuscript just received from Captain SLEEMAN, that the *Sáhs* frequently reigned at *Garha Mandela*.

प्रस्थला मद्रगान्धारा आरट्टा नाम तस्कराः।
वशाति सिन्धुसौवीरा दृति प्रायो विकुत्थिताः॥

which M. LASSEN translates:

Prasthali, Madri, Gándhári, Arattí profecto latrones;
Necnon Basates et SAUVIRI SINDHUIDÆ: ita in universum vituperantur.

And in a note he alludes to a variation in the manuscript whence Dr. WILSON thus translated the same passage: 'The Prasthalas (perhaps borderers) Madras, Gandháras, Arattas, Khosas, Básas, Atisindhus (or those beyond the Sindhus), Sauviras, are all equally infamous.'— "Legit igitur नामतःखशा; Sed præstantiorem præbet lectionem Codex Parisiens; et Chasi huc non pertinent; a Pentapotamia enim sunt alieni. Básorum et Atisindhuidarum nomina ignota mihi sunt et in errorem *h. l.* induci sese passus est doctissimus Anglus. Compositum non ex tribus, sed ex duobus tantum nominibus constat, Bá.áti et Sindhusaúvíra. Posteriores laudantur Râm. I, XII, 25. ed. Schl. et alio nomine appellati sunt *Cumálaca* (Hem. ch. IV. 26.) Prius nomen sæpius in Bháratea reperi, ex. c. in hoc versu, ex libro sexto descripto:

गान्धाराः शद्वलि प्रच्य पार्वतीया वशातयः।

Gandhári, Saddhales, orientales, montium incolæ atque Basátes."

The Professor's reading so entirely accords with the conditions of our *Sáh* or *Sau fraternity* that no doubt can be entertained of its being correct; and we gain a very important step by learning the Sanskrit mode of spelling the term सौ, since we may thence hazard a new interpretation of the word *Saurashtra*, as *Sau-rashtra* 'the country of the *Sau* tribe,' a more close and plausible one than that hitherto accepted of *Saurya-rashtra* the country of the sun-worshippers.

The 72nd couplet confirms such an interpretation by ascribing precisely the same iniquities (theft, or perhaps commercial usury) to the *Saurashtrians*, the vowel being only shortened for the sake of the verse.

प्राच्या दासा दृषला दक्षिणात्याःसेना बाह्लीकास्तस्कराःसुराष्ट्राः

Orientales servi sunt, meridionales turpes, Báhici latrones, Surashtri prædatores.

Commentators have uniformly supposed *Surashtra* to denote the modern *Surat*, but this is an error: the name applies only to the *Surastréne* of PTOLEMY, and *Surat*, as I am assured by Mr. BORRODAILE of the Bombay Civil Service, is comparatively a modern town; and its name, now persianized into سورت *Súrat*, was originally *Suryapur*, the town of the Sun.

I waive all discussion here on the important bearing the above theory has on the age of the Mahábhárat and of the Ramáyana: either the

Sáhs of *Sinde* must be very old, or the passages of abuse and praise in these poems must yield their claim to high antiquity. At any rate a departure from strict oxthodoxy is established against the tribe.

There are some other points in the reverse legend of the coins before us that call for further explanation—first, of the word *Kritrima*. The expression quoted above from ARRIAN indicates something of an elective government even while the Parthians ruled at *Minagara*; each party as it acquired the ascendancy in the politics of the state '*chosing a king out of its own body*.'

Dr. VINCENT supposes that the contending parties (the whigs and tories of their day) were not both Parthians, but more probably Parthian and Indian. This view is not a little supported by the coin evidence, and it is only necessary to imagine that the native influence of a rich mercantile aristocracy at length prevailed and excluded the Parthians altogether. Of these *Parthians* we see the remnant in the Parsees so numerously located in *Guzerat* and *Surat*, and can easily imagine, from their numbers and commercial enterprize, that they must have been formidable rivals to the indigenous merchant-kings.

Something of this feudal system of government is visible to this day in the fraternity of the *járajahs* or chiefs of *Cattywar* and *Cutch*. The name *jarájah* might, without any unwarrantable license, be deduced from *sah-rája*, persianized to *ja-rája* or local chieftain. In 1809 there were twenty or more of these chiefs in *Cutch* alone able to furnish a contingent of from two hundred to one thousand men*. In the *Guzerat* peninsula the number must be much greater, since in 1807 there were estimated to be five thousand two hundred families in which the inhuman custom of female infanticide was regarded as a dignified distinction of their caste!

In the names of these modern chieftains we can trace a few of our list *atra*, *visa*, and *vira*: and a town called *Damanagar*, may have owed its foundation to our prince of that name. The *Jah-rájahs* and *Catties* call themselves Hindus, but are very superficially acquainted with the doctrines of their faith—the real objects of their worship are the Sun and the *Matha Assapurí*† the goddess of nature,—doubtless the *Nanaia* of more classical *Bactria*. They are said to impress the Solar image on every written document. We are accordingly prepared to find it on their ancient coinage, where it is seen on the right hand side, the moon (*matha* for *más* or *máh*) being always in company on the left.

* HAMILTON'S Hindostan, I. 587. † Ditto, I. 637.

The central symbol I have had to explain so often and with so many modifications, that I really feel it becomes more of an enigma the more is said of it! It occurs on the Pantaleon Greek coins—on the Indo-Scythic group—on the Behat Buddhist group—on similar coins dug up in *Ceylon*—and here at the opposite extremity of India. It is the Buddhist *Chaitya*, the Mithraic flame,—mount Meru, mount Aboo! —in fact, it is as yet unintelligible and the less said of it, the sooner unsaid when the enigma shall be happily solved!

Legend of the obverse.

Having satisfactorily made out the contents of the inscription on the reverse of the *Saurashtra* coins, I might have hoped to be equally successful with the obverse; but here I must confess myself quite foiled. From the obverse die being somewhat larger than the other, it seldom happens that a perfect legend can be met with; and by placing together all the scraps from different samples, enough only can be restored to shew: 1st, its general character; 2nd, to prove that *it is not Sanskrit*; and 3rd, that it contains two distinct styles of letter on the opposite sides of the head; that on the right having a strong resemblance to Greek, the other a fainter to Pehlevi; but both written by an ignorant hand. The three or four Pehlevi letters are variable and quite illegible; but the others, by combining the two first examples in the plate, (No. 5, from my coin; 8, from Mr. Steuart,) might be read *vonones vasileus*, allowing sufficient latitude for the corruption of a century or two. Should my conjecture be admitted even to the extent that the letters are Greek, we may safely attribute their presence to the supremacy of the Arsacidan king of Persia, or, looking farther back, to the offsets of the Bactrian kingdom in the valley of the *Indus*, where the Greek characters were still retained, as proved by the coins of Kodes and Nones, (or *Vonones*) Azes, &c.; and we may conclude that his portrait, and not that of the tributary rája, was allowed to grace the coinage of *Saurashtra*.

The sway of Demetrius we know from Strabo to have extended over the delta of the *Indus*, and the retrenchment of a single particle from his text would make it include *Saurashtra* also. Speaking of Menander's Indian possessions he says:

"Εισε καὶ τὸν Ὕπανιν (Ὑπασιν) διέβη πρὸς ἕω καὶ μέχρι του Ισαμου (Ἰωμάσου) προ ἦλθε. ταυὲν γὰρ αὐτὸς, ταδε Δημήτριος Ἐυθυδήμου υἱος τοῦ Βακτρίων βασιλέως οὐ μόνον δε Παντηλην κατεσχον, αλλά και τῆς ἄλλης παραλίας τὴντε Τεσσαριόστον καλουμένην καὶ την Σιγέρτιδος βασιλειαν.

On this important passage many have been the opinions expressed by the learned. Bayer refers the third name (the first two being fixed

as the *Hyphasis* and *Jumna*) to the mouths of the Ganges: "quam Strabo, alteram oram maritimam nomine Τεσσαριοστου dicit? nempe nullam potuit, nisi quæ ad Gangis fluminis ostia ubi et Σιγέρτιδος regnum." M. LASSEN, from whose *Pentapotamia* I have cited the above extract, thinks that the word merely alludes to the coasts in the neighbourhood of *Pattalene*, and he identifies *Sigertis* with the Sanskrit *Trigertá* त्रिगर्त in the province of *Lahore*. MANNERS places the former in *Guzerat*: "ad oram maritimam, quæ hodie *Guzerat*, olim nomine Sanskrit गुर्जार (*Gurjára*) appellata est, τεσσαριοστου regionem refert Mannertus, quod at veritatem haud dubie proxime accedit, *sed nil certius de hoc nomine invenio**."

Now by abstracting, as I said before, the twice repeated particle, τε, or by changing τες, to the article τον or της, the whole obscurity of the text disappears, and the βασιλεια της Σαριοστου καλουμένη stands forth as the maritime kingdom of *Saurashtra*. This interpretation is surely more natural than the extension of MENANDER'S rule to the extreme east of India, merely to find another maritime delta and port for the græco-latinized corruption of a name quasi *Tessariostia!*

But we dare not venture on any speculations in regard to Greek names or affairs, lest we undergo castigation from the *Hellénic* critics of Paris, who are surprised at our ignorance of authors, ancient and modern, Greek and German, whose works we regret to say have never yet visited the banks of the Ganges! We 'Indianistes' must then leave this investigation to M. RAOUL DE ROCHETTE as being altogether, to use his own words, "hors du departement de nos etudes!"

There are still two series of *Saurashtra* coins to be examined, but I have not yet wholly succeeded in deciphering them, and my readers will doubtless rejoice at such an excuse for postponing their discussion: I cannot, however, let pass the present opportunity of mentioning, as a highly curious circumstance, the very great similarity between the old Sanskrit and the Greek character. Their striking uniformity becomes more palpable the farther we retire into antiquity, the older the monuments we have to decipher; so that even now, while we are quite green in the study, we might almost dare to advance (with the fear of M. RAOUL DE ROCHETTE before us), that the oldest Greek (that written like the Phœnician from right to left) was nothing more than Sanskrit turned topsy turvy! A startling proposition this for those who have so long implicitly believed in *Cadmus*, and the introduction from *Egypt* of what, perchance, never existed there. Yet there is nothing very new nor very unnatural in the

* De Pentapotamia Indica Commentatio, C. LASSENII, 51.

hypothesis; since the connection of the Greek with the Phœnician and Samaritan alphabets, has been admitted as a strong evidence that "the use of letters travelled progressively from *Chaldea* to *Phœnicia* and thence along the coasts of the *Mediterranean**:" and the Greek language is now so indisputably proved to be but a branch of the Sanskrit stem, that it is not likely it should have separated from its parent without carrying away some germs of the art of writing, already perhaps brought to perfection by the followers of BRAHMA. But my arguments are not those of books, or learning, or even tradition, but solely of graphic similitude, and ocular evidence.

The Greek letters are dressed by a line at the foot, in most cases, as A, Δ, Λ, M, Ω, Υ, &c.;—the Devanágrí are made even along the upper surface of the letters, and in later ages a straight line has been introduced at the top, from which the grammatic elements are suspended. The Greek alphabet is devoid of all system and has had additions made to it at various times. Some of these, as Φ Χ, Ψ, Ω, are precisely those which present the least resemblance to the Sanskrit forms.

I have placed my evidence at the bottom of plate XXIV. taking my Greek type from the well-formed letters on coins, and from the boustrophedon tablet of Sigeum.

Of the vowels, A, I, O, and Υ, present a striking conformity with the vowels ऋ, ऌ, and the semivowels व and य of the oldest Sanskrit alphabets inverted. The vowel E is unconformable, and resembles more the short ε of the Zend. The long H is a later introduction and appears to be merely the iteration of the short vowel I, as ω is of OO.

In the consonants, we find Β, Γ, Δ, Ζ, Θ, Κ, Λ, Μ, Ν, Π, Ρ, Σ, Τ, in fact every one of the letters, excepting those of after invention, are represented with considerable exactness by the ब (or double ब्ब), ग, ष, ष, ष, क, ल, म, न, प, र, ज, त of the oldest Sanskrit alphabet, although there is hardly a shadow of resemblance between any pair in their modern forms. The same precision cannot be expected in every case; the Β, Δ, Θ, Λ, Μ, Ν, Π, Ρ, Τ, require, like the vowels, to be viewed in an inverted position: the Γ, and Σ, remain unturned: the Ζ, and Κ require to be partially turned.—The Λ and the Ν may be deemed a little far-fetched; the Β taken from the double *v*, and the Δ from the aspirated ध may also be objected to; but taking a comprehensive view of the whole, it seems to me impossible that so constant and so close a conformity of the alphabetical symbols of two distant nations should exist without affording demonstration of a common origin. Whether the priority is to be conceded to the Greeks,

* Pantographia, page 107.

the Pelasgians, or the Hindus, is a question requiring great research, and not less impartiality, to determine. The palæography of India is now becoming daily a more interesting and important study, and it connot fail to elicit disclosures hitherto unexpected on the connection between the European and Asiatic alphabets.

VIII.—*On the Properties ascribed in Native medical works to the Acacia Arabica.* *By* LEWIS DA COSTA, *Esq.*

At a time when the intended formation of a Pharmacopeia for India has been publicly announced by the new Medical College, it is a desideratum to know how the natives have treated the subject of medicaments,—what of good their books contain,—what of error. Our medical practice pays perhaps too little attention to vegetable remedies, of which the Orientals possess an infinite variety, many inert, but many active, and many also quite unknown to Europeans. I had some intention of publishing a translation of the *Mukhzun ool udweeyuh* by MOOHUMMUD KHOSRU KHÁN, but there is no encouragement for such an undertaking in India. I therefore think it the wiser course in the first instance to publish a specimen by which the pharmacopeist will be able to judge of the aid he might derive were the whole work (collated with others) placed before him in an English translation. I use the *Gilchrist* orthography.

أم غيلان OOMMEGHEELAN, ACACIA ARABICA, commonly called *Tuleh* طلح The people of the desert name it *Shuokeh-i-Misr* شوكهٔ مصر (Egyptian thorn), and *Shuokeh-i-Arabia* شوكهٔ اعرابيه (Arabian thorn). In Persian it is called *Moogheelan* مغيلان; and in Hindee, *Keekur* كيكر and *Bubool* ببول.

A thorny plant, generally growing in forests and at the foot of mountains. It is of two kinds, large and small, both resembling each other in appearance and foliage. The *first* kind is smaller than an apple tree, and the branches covered with thorns; the trunk is hard and at first green tending to white, but as it advances in age it assumes a blackish hue resembling the ebony آبنوس but tinged with red. The fruit, which is like a bean or bean pod, resembles *Baqla* باقلا and *Khurnoob* خرنوب *(Phaseolus vulgaris* and *Carobs)*, and is flat, and knotty; the knots vary from five to nine in each bean, and within each knot resides a seed in appearance like *Turmis* ترمس (Egyptian Lupin), but flatter and of a red color. The bean is variously called *Quruz* قرظ, *Sunt* صنط, *Ghurub* غرب and *Usnat* عصناة. The pressed juice is called *Uqaqia* اقاقيا (*Acacia*). The gum of a red and yellow semi-transparent color is called *Sumugh-*

i-Urbee صمغ عربي (Gum Arabic). It is said that between the bark and the body a resinous substance is found resembling the gum, but which is not gum; when this substance is freed of a red fluid that resides in it and washed, it becomes very white, and when chewed like the *Ilk* علك (gum resembling mastich), it discharges an odoriferous liquid and leaves an agreeable smell in the mouth.

The second kind, called *Sulum* سلم by the Arabs, is less thorny, and sometimes has no thorn at all, and the branches are very profuse; the trunk is blacker than the first kind. The fruit, which is like a bean and called *Quruz* قرظ is not knotty; it contains from 9 to 31 flat seeds according to size, and is of a deep violet color. Between each seed and around it a white coating is seen and between this coating and the shell is lodged a mucilagenous and gummy fluid of a deep yellow color. The blossoms of both the kinds are of a yellow color and globular form, emitting an odoriferous scent. The leaves of both the kinds are, in size and profusion, alike, and grow from a thin fibre by pairs in an oblique direction, and are astringent to the taste. There grows in some places a *third* kind of this plant, the branches of which are full of knots.

Character of all the parts. Cold and dry in the 2nd degree.

Medical Properties. Binding (restraining the discharge of redundant matter) and repellant. A drink prepared of the juice of its blossoms is good for the cure of palpitation from heat, and the horror, and for strengthening internal organs, either taken by itself or with other proper medicine. The leaves are deobstruent (opener of obstructions) and good for the stoppage of diarrhœa. If fused by way of embrocation it strengthens laxed members. The tender green leaves if steeped over night in water and exposed to the influence of the moon, and the clear water taken off and drank in the morning, will cure excoriation of the urinary duct and allay the smarting of urine (ardor uninæ). A powder prepared of equal parts of the bark, the leaves, the blossoms and the gum, and from ½ a drachm to 1 drachm taken regularly every morning, will thicken and retard the semen, prevent involuntary discharge, &c. The young leaves with a little white cummin seed, and one or two buds of pomegranate bruised and steeped in water, and strained and heated, and a few (6 or 7) pebbles or shards well heated and cooled in it (4 or 5 times), will prepare a liquid to prevent looseness in children in the last stage of teething, which is a very trying and weakening season with them; this might also be given to adults with good effect—the quantity to be regulated according to strength and age.—A plaster prepared of green leaves is good to fill up wounds and subside inflammation. A decoction made of the leaves is given for the protusion of the anus and for drying the humidity of the womb. Pressed juice of the leaves and fruit stops the flowing and spitting of blood. The fruit boiled in water, and a piece of cloth soaked in it several times will make a good Pessary. Of the beans a cerement is thus made—split the beans and take the seeds out; rub briskly the inner part of the bean upon a piece of new cloth, until the pulp and all the humidity is thoroughly absorbed in the cloth, which when dried will become like cerement; of this cerement stays are made and worn by women for several days on their bosom to brace up and tighten fallen and slackened breasts. Bark of the trunk and of

the branches is used for the stoppage of blood from fresh wounds. This forms the principal ingredient of the oil of *Shekh Sunnan*. The bark of the tree bruised and steeped in ten times the quantity of water and kept for two days, and then boiled and the liquid reduced to one half the quantity, and then strained off after rubbing the bark well in it, and kept in a china or a glass vessel, will make an excellent wash for women to use during menstruation after urine—it serves to contract the vagina considerably. The fruit, leaves and bark are good for tanning leather in lieu of *Mazoo* مازو (gall-apple). The bark and blossoms are principal ingredients in making molasses, and spirituous liquor of the same.

The root and the bark are detergent. They make a good dentifrice for strengthening the gums لثہ. A brush made of the thin sprigs is used for strengthening the teeth. The wood is used, in consequence of its extreme hardness and solidity, in making wheels for carriages, and instruments for tillage and tent pins. There is another kind of *Oommigheelan*, of which the leaves, fruit, color and bark resemble the 2nd kind, but it has a very bad odour, and has great abundance of blossoms. This kind, which generally grows in Bengal, is brought to no kind of medical use whatever: the filament of its root, however, if taken to a snake, will cause it to drop its head and make it languid.

Remarks. By the European physicians the gum is only used. They say "that gum exerts no action on the living system; but is a simple demulcent, serving to lubricate abraded surfaces, and involve acrid matters in the primæ viæ. In the solid form it is scarcely ever given unless to sheathe the fauces, and allay the trickling irritation which occasions the cough in catarrh and phthisis pulmonalis; in which case a piece of it is allowed to dissolve slowly in the mouth. It is chiefly used in the state of mucilage.—*London Dispensatory.*

اقاقیا AQAQIA. A name given to the pressed juice of *Quruz* قرظ and *Quruz* is the fruit of the *Tuleh* تلہ, from which the Gum Arabic is obtained. This plant in Hindí is called *Keekur* کیکر, and the pressed juice of the fruit *Keekur ka rus* کیکرکارس. By the Franks or Europeans it is called *Acacia.*

Quality. That obtained from unripe fruit previous to its drying, is of a red ruby color; and when dried, it assumes a greenish hue mixed with red and black. That obtained from fruit after it is ripe, is of a black color. The former kind is always chosen for medicinal purposes; it has an agreeable smell, of a mixture of green and black color, and is weighty and hard.

Character. When unwashed *cold* in 1st, and *dry* in the 1st and 3rd degrees. When washed *cold* and *dry* in the 2nd degree.

Medical properties. Drying, repelling, and binding مجفف رادع قابض. It stops flow of blood from any part of the body نزف الدم; also from the mouth, نفث الدم It strengthens the stomach معدہ and the liver کبد, and prevents the flow of humours (by the nose) arising from heat حابس نزلات حارہ and the dysentery سیلان. It is good, both internally and externally, in cases of

languor of the anus and of the womb استرخاء معدہ ورحم. As ointment it allays inflammation of the ophthalmia, strengthens the sight بصر, attenuates the humours, and removes redness. It is introduced in medicines for the cataract ظفرہ. If applied as ointment to inflammations arising from heat اورام حارہ, it attenuates and prevents the determination of the humours in that direction. It is good for the whitlow داخس, for the cracking of the skin from cold, for the relaxation or weakness of the joints, and for the protrusion فروج of the navel of children and the anus: and if applied to the hair, it gives a fine black color; if used with myrtle leaves برگ مورد and red rose گل سرخ, it prevents flow of perspiration ادرار عرق, and removes its bad odour: applied to the body and the face (as a cosmetic), it improves the color of the skin; with albumen ovi (white of egg), it is good for burns by fire, and prevents blistering; with *Momeroghun* موم روغن (an ointment of thick consistence made of different ingredients and bee's wax), called in Arabic قیروطی, it is also good for burns by fire and for the whitlow. If used as powder, it is efficacious in preventing flow of blood from any part of the body: if boiled in water, and the liquid used as an embrocation on wearied or languid parts, it will strengthen and prevent the determination of the humours that way. Used as a clyster, it alleviates the excoriation of the intestines سحج, and prevents flux with occasional issue of blood اختلاف الدم, and strengthens the intestines امعا. If used as an injection اختعان to the womb, it absorbs نشف morbid secretions رطوبات: applied as pessary and suppository, it prevents the flowing of blood, the protrusion of the anus and the womb, رحم its languor and humidity (flowing of watery humour). As plaster غماد it is good for the protrusion of the pupil of the eye برامدگی حدقہ, for inflammations arising from heat and erysipelas باد سرخ or: سرخ باد (ignis sacer or St. Anthony's fire); also inflammation of the anus and the womb, and it strengthens weakness of the liver: a solution of it in water preserves the hair and blackens it. Used with the Gumherb ladon لادن and oil of roses روغن گل, it is efficacious in stopping looseness in children. It creates obstructions سدہ. Its *corrector* is almond oil روغن بادام *Dose* up to 1 *dirhem*. *Succedanea* are lintel عدس and sandal-wood صندل same quantity as the *Aqaqia*. Some say the best is the juice of the box-thorn حضض, in Hindi called رسوت.

Aqaqia is thus obtained:—Take the fruit of the tree when ripe, bruise, clean, (percolate ?) and boil it on an easy fire until it obtains a thick consistence, approaching to congelation, when pour it into moulds, and when settled it is fit for use. Some introduce into it the juice of the leaves likewise. Some say that

of the congelation is effected under the sun it is the best. The best method of washing it is thus: Rub it well in water, and take that which gathers on the surface and make lozenges of it.

It is worthy of knowing that *Aqaqia* is a compound of two essences, *Luteef* لطيف and *Kuseef* كثيف the finer and the grosser particles; the former is burning, sharp, acrid, and penetrating حار حاد لذاع غايص, and the latter earthy, costive, and obstructive ارضي قابض مسدد. When *Aqaqia* is washed, the finer particles evaporate, and the grosser or earthy particles remain; consequently on some occasions, such as inflammations, the unwashed is used, and on other occasions, such as the diseases of the eye, the washed is used.

Remarks. Egyptian thorn, Acacia, Mimosa Nilotica, exudes white Gum Arabic. Juice of its pods is made into Acacia vera.

Acacia. The juice expressed from the pods of Mimosa Nilotica, inspissated to dryness.—*Gray's Supplement to the Pharmacopeia.*

صمغ عربي SUMUGH or SUMGH, Arabic; *Fooqeemunoon*, Greek; *Qamooz*, Syriac; *Deenoon*, Roomee; *Ard*, Persian; *Uzdo*, Sheerazee; *Gond*, Hindí; *Gum*, English.

A fluid matter which exudes from the body of certain trees, and concretes and dries up. The gum of each plant is described under that plant. By the word صمغ Gum without any epithet is meant Gum Arabic, which is obtained from the *Oommegheelan* (*Moogheelan*) plant. The best is of a light yellow color, clear, transparent and bright صاف شفاف براق; and when put in water and allowed to rest in it for some time, it will not swell but completely dissolve, leaving no residuum whatever; a piece held in the mouth produces the same effect as the above.

Character. Hot in a temperate degree, and dry in the 2nd degree. *Jaleenoos* (*Galen*) says, hot in the 2nd degree.

Medical properties. It is viscous and demulcent ملين i. e. soothing the chest, and is binding قابض. It (gives tone) strengthens the stomach and the intestines and preserves the bones; prevents defluxion on the chest, cough, صرفة and excoriation of the lungs, or peripneumony قرحة ريه and harshness or soreness of the throat خشونت حلق and the windpipe قصبة ريه وسينه, it clears the voice, and prevents the determination of morbid humours to the chest انصباب مواد نزلي برسينه. If a piece of it be held in the mouth and suffered to dissolve gradually, or if it be taken in pills, or some proper medicines it assists expectoration نغث. From 2 to 3 *misqals*, it is efficacious in diarrhœa and abrasion of the intestines. Fried in oil of roses, it is good for sanguinary discharges from all parts of the body, excepting from the womb, and in piles بواسير. It stops diarrhœa. If 1 *misqal* of the gum, well ground and mixed in 1 *ougeah* of fresh cow's butter, be taken daily for three or seven days it will effectually stop flow of blood from the mouth, the chest, the lungs الة, and from all other

internal organs اعضاء داخلي excepting from the womb, and in piles. If taken with fresh goat's milk, it will have the same effect. With white of eggs (albumen ovi), it is good for burns by fire: a solution of it with rose-water dropped قطور into the eyes affected with the ophthalmia, *Sulaq* سلاق cutaneous eruptions in the eye-lids, and *Jurb* جرب itching, is highly beneficial in removing those complaints. It is injurious to excrementary discharges. Its corrector مصلح is *Kuseera* كثيرا gum tragacanth, and (it is said) rose-water and sandal-wood. Its succedaneum بدل is almond gum صمغ بادام and myrtle seed حب الاس. —*Mukhzun-ool Udweeyuh, by Moohummud Khasroo Khán.*

IX.—*Proceedings of the Asiatic Society.*

Wednesday Evening, the 7th June, 1837.

The Hon'ble Sir EDWARD RYAN, President, in the chair.

Dr. J. SWINEY, Lieut. M. KITTOE, Professor O'SHAUGHNESSY, G. W. BACON, and FRANCIS ROBINSON, Esqs. were elected Members of the Society.

Mr. MUIR was proposed by Dr. FALCONER, seconded by the Secretary.

M. F. EYDOUX, Chev. Leg. Hon., Naturalist of the *Bonite* Corvette, solicited through Professor GOODEVE, the honor of being chosen a corresponding Member. Referred to the Committee of Papers.

The following reply from Government was received to the reference regarding the MACKENZIE MSS.

To JAMES PRINSEP, Esq.
Secretary to the Asiatic Society.

SIR,

With reference to your letter, dated 19th September, 1836, I am directed to transmit to you the accompanying copy of a communication from the Government of Fort St. George, and to state for the information of the Asiatic Society, that the Right Honorable the Governor General of India in Council, has authorized the Government of Fort St. George to expend a sum not exceeding 7,000 rupees, in order to obtain from the Rev. Mr. TAYLOR an examination and collation of the manuscript works in the vernacular languages of India, collected by the late Colonel MACKENZIE, and the restoration of any that may be found to deserve it.

I am, Sir,
Your obedient servant,
H. T. PRINSEP,
Secy. to Govt.

Council Chamber,
10th May, 1837.

Mr. TAYLOR estimates, that the preliminary collation and examination of the manuscripts, including the restoration and copying of those injured, decayed, or becoming illegible, as may appear desirable on investigation, may occupy about a year; and half a year more is allotted for those at *Calcutta**. Of the whole he is to give an analysis, whence it will be determined what shall be translated or published in original. He ventures to anticipate "some results from the enlightened recommendation of the Asiatic Society, that will justify their decision to the literary world, and furnish an important addition to our knowledge of history, mythology, philosophy, ethics, and local customs, modes of thinking and other habits of the people of South India."

A letter from the Secretary of the Asiatic Society of Paris, M. E. BURNOUF, communicating officially the grant of 1,500 francs per annum, for the

* We have none of the Tamul or Telinga MSS. in our library.

purchase of Sanskrit MSS. on account of the French Government, and requesting the Calcutta Society to undertake the commission.

The following letter from Capt. HARKNESS, Sec. Roy. As. Soc. of London was read.

Royal Asiatic Society's House, 14, *Grafton Street, Bond Street, London, 24th January*, 1837.

SIR,

I have the pleasure to acknowledge the receipt of your letter of the 6th of June last, enclosing a bill on Messrs. MORRIS and Co. for £31 10*s*. the amount of your Society's subscription to the Oriental Translation Fund up to the year 1835, *inclusive*.

With reference to the last paragraph of your letter, I am requested to say that, as a body, the Oriental Translation Committee is precluded from taking any portion of the Oriental works (texts) you are now publishing; as it could not, consistently, with the objects of its institution, present them to its subscribers. Several of the Members, however, have expressed their intention of becoming, individually, subscribers to each edition, as completed: and I hope, also, to obtain a few subscribers from among the Members of the Royal Asiatic Society. In the meanwhile I trust that the powerful advocacy which the cause received in this country has been, long ere this, productive of much benefit. It was supported by the united influence and exertions of the Royal Asiatic Society, and the Oriental Translation Committee; and the result was confidently understood to be, that the Bengal Government was to be instructed, at least, to defray all the expense attending the publishing of the works which it had commenced to print, but which it had transferred to your Society to complete.

I have the honor to be, Sir,

Your most obedient humble servant,

Oriental Translation Committee. H. HARKNESS, *Secretary*.

The Secretary observed, that

Captain HARKNESS' letter was the first official notice the Society had received from London of the fate of their memorial, regarding Oriental publications, sent home through the Government here, and in duplicate through the Royal Asiatic Society, in 1835. It appeared that, from motives of delicacy, the Council of the Royal Asiatic Society thought it right not to publish what had been done in the Annual Review of its proceedings, while the subject was still under consideration; but that the favorable result of the application to the Court of Directors being now generally known, they ventured to announce the success of their intercession. He thought, therefore, that it behoved the Society to notice the information they had long since possessed through the private correspondence of their English agent.

The deputation appointed by the Royal Asiatic Society to wait upon the Chairman, and Deputy Chairman, and upon the President of the Board of Control, consisted of the Right Honorable C. W. W. WYNN, President, Sir GORE OUSELEY, Sir A. JOHNSTON, Sir G. STAUNTON, Vice-Presidents, and Professor WILSON. Mr. WYNN opened the interview in both instances, and stated the case very clearly and sensibly, going into the general question—the impolicy of setting aside the native literature and institutions, and dwelling particularly on the assistance sought for the abandoned Oriental publications. Professor WILSON also delivered a long address (the substance of which was published in the form of two essays in the London Asiatic Journal). Sir GORE OUSELEY, and Sir A. JOHNSTON, followed; and the high authorities replied in set speeches, expressing a disposition to favor the application without any pledge to the line that the Court or the Board would pursue. The Court's reply was understood to be delayed through the lamented death of Mr. MILL, the historian of British India who had been empowered to draw it up.

This then was the moment for the Society, to shew its gratitude to the distinguished individuals whose influence and talents had been so warmly exerted in supporting their memorial. Professor WILSON and Sir GORE OUSELEY, were already on the list of their Members; to them nothing more than their warmest

thanks could be proffered: but to the Right Honorable President of the Royal Asiatic Society, to Sir ALEXANDER JOHNSTON, and to Sir G. STAUNTON, were due the highest compliment the Society was capable of paying.

He begged therefore to propose, that these gentlemen be elected honorary Members, without the usual form of reference to the Committee of Papers, and that letters of thanks be addressed to each for the cordial support they had given to the cause of Oriental literature.

After a few objections on the score of departure from established form, and want of full official information, the proposition was put from the chair and carried Nem. Con.

A letter from Professor RAFN, Secretary of the Royal Society of Northern Antiquaries at *Copenhagen*, acknowledged receipt of Asiatic Researches, xiii.—xviii., and forwarded the Society's Reports for 1836. One addressed to the English Members, contains an account of Iceland from the oldest Icelandic records.

Professor O. FRANK of *Munich* acknowledged receipt of the *Mahabhárat*, vol. ii.

The Secretary of the Antiquarian Society, ditto of the xxth vol. As. Res.

The following Report of the Committee of Papers on the subject of the Museum, was read:—

To JAMES PRINSEP, Esq.

Secretary to the Asiatic Society of Bengal.

Report of the Committee of Papers on the Museum Question.

The Committee having perused Dr. PEARSON's Report on the operations of the Museum for the second experimental year, and having examined the state of the objects of Natural History, acquired, set up, and arranged under his superintendence, is of opinion that the Society is much indebted to his zeal and exertions, and that the sum voted for the support of the Museum in May, 1835, and renewed in May, 1836, has been well bestowed and profitably expended.

2. That nothing less than the actual demand for the Society's income on other objects imperatively necessary, such as the publication of its Researches, and the repair of its premises, would warrant the withdrawal of support from a department every day becoming of greater magnitude and importance; but that the following estimate of the receipts and payments of the Society for the ensuing twelve months, renders this continuance of the Museum establishment on the Society's present means, inexpedient.

Estimated Receipts, for 1837-8.

Cash balance in the Bank of Bengal,				652	14 1
Interest on the Papers deposited with the Government Agent,				835	0 0
Quarterly contributions,				6,500	0 0
Allowance from Government for Oriental library				936	0 0
				8,923	14 1

Estimated Charges.

Arrears of Establishment for March and April, 1837,		563	11 0		
The Museum allowance for April,		213	5 4		
Subscription to Journ. As. Soc., for 1836, not yet paid,		1,293	0 0		
Establishment and charges for 12 months,		3,200	0 0		
Subscription to the Journal Asiatic Society, for 1837,		1,500	0 0		
Ditto to the Oriental Translation Fund in England, 10 guineas per annum,		200	0 0		
To printing 2nd part of the 19th vol. As. Researches,		2,500	0 0		
Cleaning and painting the house exclusive of any alteration and repairs,		900	0 0	10,370	0 4
	Deficiency, Co.'s Rs...			1,446	2 3

without estimating even a reduced allowance for the maintenance of the Museum.

3. That, viewing the maintenance of the Museum as a national object, and calculated to be of immense importance to science if placed upon a footing of efficiency, with a professional Naturalist at the head, directing researches and

systematizing information obtained from various sources, both public and private, in all the branches of physical science, but more particularly in regard to the Natural History of British India and Asia at large; it is incumbent on the Society to make a full and urgent representation to Government on the subject, and to solicit such support as is accorded in most other countries to similar institutions of national and scientific utility.

That historical, antiquarian, and statistical researches, although they may not demand so large an outlay as the prosecution of physical inquiries, merit equally the Society's attention, and the encouragement of Government, and should be included in the proposed representation, and that therefore a yearly grant of 10,000 rupees should be solicited in aid generally of the objects of the institution.

4. That pending the application to Government for pecuniary assistance, it is desirable to maintain the Museum on its present footing, and to retain the services of Dr. PEARSON as Curator, from month to month, until the question be decided.

EDWARD RYAN,
For the Committee of Papers.

Proposed by Mr. W. CRACROFT, seconded by Mr. E. STIRLING, and carried unanimously, that the Report be adopted by the Society.

The Secretary then read draft of the proposed application to Government, which was ordered to be circulated in the Committee of Papers and forwarded without delay.

Library.

The following Books were presented.

Straker's Catalogue of a collection of Oriental MSS. for sale in London.

Commentaire sur le Yaçna l'un des Livres Religieux des Parsea, par. M. Eugene Burnouf, Membre de l'Institut, Professor de Sanscrit au College de France, tome 1. Part II.—*by the author.*

Memoirs sur Deux Inscriptions Cuneiformes trouvées pres d'Hamadán et qui font maintenant partie des papiers du Dt. Schulz, by ditto—*ditto.*

Memoire sur le Guacharo (Steatornis Caripensis) (Humboldt) par M. L'Herminier. D. M. P.—*by M. Fortuné Eydoux through Professor Goodeve.*

Ditto sur L'Dodo, autrement Dronte (Didus ineptus), par H. D. De Blainville—*ditto ditto.*

Gita Govinda Jayadevae Poetae Indici Drama Lyricum, by Christianus Lassen —*presented by the author.*

Journal of the Royal Asiatic Society, No. VI.—*by the Roy. As. Soc.*

Census of the Armenian population of the city of Calcutta, by Johannes Avdall, Esq —*by the author.*

The following books were received from the Oriental Translation Fund.

Harivansa, or Histoire de la Famille de Hari, par M. A. Langlois, tome 2.

Laili and Majnun, a Poem, from the original Persian, by James Atkinson, Esq.

The History of the Temple of Jerusalem, translated from the Arabic, with Notes and Dissertations, by the Rev. James Reynolds, B. A.

Kan-ing p'ien, Le Livre des recompenses et des Peines en Chinois et en Francais, par Stanislas Julien.

Chronique D'Abou-Djafar Mohammed Tabar, fils de Djarir fils d'Yezid, par Louis Dubeux, tome 1.

The following books were received from the Booksellers.

Lardner's Cabinet Cyclopedia—*Russia*, Vol. II.

————————Reformation, Vol. II.

————————Swainson's Birds, Vol. I.

Wellesley's Dispatches, Vols. II. and III.

Correspondence of Clarendon and Rochester, and two vols. of Lardner's Encyclopedia received from home at the charge of J. S. STOPFORD, Esq. to replace those lost by the wreck of a pinnace last year.

Baboo RAM COMUL SEN presented a copy of the catalogue of the Sanskrit works in the College of Benares, for publication with the catalogue of the Society's books now in the press.

The Government of Bombay presented 5 copies of Lieutenant T. S. CARLESS' Survey Report of the Indus navigation below *Hyderabad*.

The Right Honorable the Governor General forwarded a copy of Professor WHEWELL's Researches on the Tides, 6th series: with a request that the Society would undertake to promote inquiries on the Indian coasts to complete the theory of cotidal lines for the Bay of Bengal, towards which the Government would be happy to contribute its aid.

This sixth series of Professor WHEWELL's researches gives the results of an extensive system of combined observations in Europe and America in June 1835, which have produced a very material improvement in the map of the cotidal lines before published.

The most curious and important branch of the investigation is that for determination of the *diurnal inequality*, or difference between the day and night tide, which depends on the declination of the moon north or south of the equator. The existence of this inequality has long been known, but its laws have been misunderstood, and it has never been attended to in tide tables, though of material importance in the navigation of river mouths and shallow seas.

It was resolved that a circular should be addressed to members and correspondents of the Society residing on the coast stations, requesting their aid in procuring data for the tides of the Indian Ocean, and furnishing a copy of Professor WHEWELL's instructions, printed in the Journal in 1833.

Mr. W. H. MACNAGHTEN presented two works in the Marhatta and Hindí languages: the *Siddhánta Siromani prakasa* by SUBHA'JI BA'PU, and the *Bhugola saro likhyate*, by Srí UNKARA BHAT Joshí, written for the purpose of explaining the correct system of astronomy to their countrymen.

Mr. MACNAGHTEN also exhibited to the meeting two handsome silver emblematical inkstands, representing a jotishi pandit seated between two globes, expounding their use from the Siddhántas—and around the stand, richly embossed, the twelve signs of the zodiac—a Sanskrit couplet on each expressing that it was presented by the Governor General in Council in token of approbation of the astronomical learning and zealous endeavours of the pandits to enlighten their countrymen. The following extract of a letter from Mr. WILKINSON, Governor General's Agent at Bhilsa, describes what they had done to deserve so high a compliment.

"I had shortly before entertained in my private service a Siddhánti who possessed a higher degree of knowledge of his profession, and having had an opportunity of making myself whilst at *Kota* in some degree acquainted with the Hindu astronomical books, I had communicated a knowledge of them to my own Shástrí, by name SUBHA'JI' BA'PU, a man of wonderful acuteness, and intelligence, and sound judgment, and to UNKARA BHAT, one of the principal Joshís of this part of *Malwa*. The arguments by which I had for the previous eight years of our connexion in vain endeavored to impress on SUBHA'JI' BA'PU a conviction of the truth of the real size and shape of the earth and of other important physical facts, now carried to his mind the clearest conviction when shewn to be precisely the same as those of their own astronomical authors. His was the master mind; and it exercised its influence over the minds of all the other pandits. He was lost in admiration when he came fully to comprehend all the facts resulting from the spherical form of the earth, and when the retrogressions of the planets were shewn to be so naturally to be accounted for on the theory of the earth's annual motion, and when he reflected on the vastly superior simplicity and credibility of the supposition that the earth had a diurnal motion, than that the sun and all the stars daily revolve round the earth, he became a zealous defender of the system of Copernicus. He lamented that his life had been spent in maintaining foolish fancies, and spoke with a bitter indignation against all those of his predecessors who had contributed to the wilful concealment of the truths that once had been acknowledged in the land.

"SUBHA'JI' BA'PU'S first care was how he was to enlighten the people of *Chanda* and *Nagpore*, the land of his birth. At *Bombay*, *Calcutta* and *Madras*, and at *Delhi* and *Agra*, and here also, the truth he said must spread, but how will the mid-land of *Nagpore*, visited by no travellers from foreign countries, accessi-

ble to no ships from other islands, and maintaining no schools,—how will the eye of its population be opened? I recommended his embodying all the facts he had learned in a treatise in Marhatha. He immediately undertook the work. I have got it printed, and I now have the honor of submitting two copies of the work, with a request that they may be presented to the Governor General of India.

"It is a work which will bear the test of even a severe criticism. It is full of philosophical reflections. From the different productions of different countries mutually necessary he argues the intention of providence to unite all mankind by commerce in the bonds of an interested affection. He hence infers the restrictions laid on Hindus against travelling to foreign countries to be violent and unnatural. He assails the folly of astrological predictions, and upholds the wisdom and mercies of Providence in veiling the future from our curiosity, and in keeping us all instant in our duties by an unfailing hope. He leaves none of the numerous vulgar errors held by all Hindus in connection with his subjects of geography and astronomy to pass without a complete and satisfactory refutation.

"UNKARA BHAT, who holds the next rank in talent and usefulness, has written a free Hindi version of SUBHA'JI' BA'PU'S book on the Paurânic, Siddhântic and Copernican systems."

Read a letter from Lieutenant KITTOE, stating that he had dispatched a cart to *Tomlook* to take down the *Bhubaneswar* slabs, the restoration of which had given the greatest satisfaction to the priests and people.

Lieutenant KITTOE also forwarded copies of the principal inscription in the old Lât character at *Aswastuma* near *Dhoulee* in *Orissa*, with a short account of the caves and temples discovered there by himself and a map of the place.

[This inscription will be seen to have arrived at a most fortunate moment.]

Captain SMITH, Engineers, forwarded accurate facsimiles of the inscriptions at the Buddhist monument of Sanchi near *Bhilsa*; with a paper describing their position; and

Captain W. MURRAY presented some beautiful drawings of this very curious mound, and of the highly ornamented stone sculpture of its gates and frieze.

The Secretary read a note on the inscriptions, which had proved of high interest from their enabling him to discover the long-sought alphabet of the ancient *Lât* character (or No. 1 of *Allahabad*)—and to read therewith the inscriptions of *Delhi, Allahabad, Bettiah, Girnar* and *Cuttack*—all intimately connected, as it turns out, in their origin, and in their purport.

Lieutenant KITTOE also presented facsimiles of a copper grant in three plates dug up in the *Gumsur* country, of which the Secretary with the aid of KAMALA KANT Pandit supplied a translation.

It relates to a grant of land by the *Bhanja* rájas to a brâhman named *Bhandeswara*.—A lithograph will be published shortly.

The Honorable G. TURNOUR transmitted a paper on an examination of the Páli Buddhistical Annals, including a translation of the *Aṭṭha kathá* of BUDDHAGHOSO, and a table of the *Piṭakattayan*

This paper will appear, at as early a period as possible.

Major J. SLEEMAN, communicated the first part of his *History of the* Gurha Mundela Rájas.

We shall also hasten to lay this before our readers.

Lieutenant SIDDONS forwarded a translation of the commencement of the *Dadupanthi Grantha*, with a promise to continue the same should it prove acceptable.

Professor WILSON formerly intended to have done the same thing—the translation of DADU'S moral instructions is highly interesting.

A list of the native tribes in *Sinde* and specimen of their language was communicated by Captain ALEXANDER BURNES from *Bahâwalpur*.

Physical.

G. Loch, Esq. C. S. forwarded for presentation to the museum a second collection of the butterflies and insects of *Silhet*.

Dr. T. Canton presented some fragments of bones *perfectly fossilized*, extracted from the superficial clay at *Rungafulla* below *Diamond Harbour*.

In these bones the animal matter is entirely replaced by iron and carbonate of lime, although they were imbedded in quite a modern alluvium. Their discovery throws a new light either on the period required for fossilization, or on the age of the alluvium.

Mr. W. T. Lewis of *Malacca*, presented the model of a Chinese double bellows for the *museum*; also some tin and gold ore.

The Tapir sent up by Lieutenant Mackenzie had, with the Committee of Papers' sanction been made over to the Secretary, it being out of the Society's views to keep living animals.

Mr. B. H. Hodgson forwarded some beautiful Zoological drawings for inspection on their way to *Europe*; also two bottles of the snakes peculiar to *Nipal*.

Lieutenant Hutton presented a notice of the Indian Boa *Python Tigris*.

A letter from Professor S. Von dem Busch, of *Bremen*, proposed exchanges of land and fresh-water shells and other objects. Referred to the Curator.

Dr. T. Canton presented drawings and a notice of one of the fossils in the Colvin collection which had been cleared from matrix for the purpose of examination.

It proves to be the skull of a gigantic fossil Batrachian, and by comparison of the relative measurements of the common frog, it must have belonged to an animal of 40 inches in length!—a proportion between fossil and recent species which has its parallel only in the neighbouring family of reptiles, the salamanders, of which the specimen from the Oeningen schist known by the name of *Homo diluvii testis*, measured three feet in length.

The following notice of a curious natural phenomenon observed in the Red Sea was communicated by Captain A. Burnes from *Bahâwalpur*.

Extract of a letter from Lieutenant Welsted *of the Indian Navy, dated Mount Sinai, September 26th*, 1836.

"You once expressed a wish to know something of the *Djibbel Narkono* or sounding mountain, concerning which there has been so much doubt and discussion in *Europe*. I visited it on my way here—it is situated on the sea shore about eight miles from *Tor*. A solid slope of the finest drift sand extends on the sea face from the base to the summit (about six hundred feet) at an angle of about 40° with the horizon. This is encircled or rather semicircled, if the term is allowable, by a ridge of sandstone rocks rising up in the pointed pinnacle, and presenting little surface adapted for forming an echo. It is remarkable that there are several other slopes similar to this, but the sounding or rumbling, as it has been called, is confined to this alone. We dismounted from our camels, and remained at the base while a Bedoin scrambled up. We did not hear the sound until he had attained a considerable height. The sound then began rolling down, and it commenced in a strain resembling the first faint notes of an Eolian harp, or the fingers wetted and drawn over glass—increasing in loudness as the sand reached the base, when it was almost equal to thunder. It caused the rock on which we were seated to vibrate and our frightened camels (animals you know not easily alarmed) to start off. I was perfectly astounded, as was Captain M—— and the rest of the party. I had visited it before in the winter month, but the sound was then so faint as to be barely evident, but now the scorching heat of the sun had dried the sand and permitted it to roll down in large quantities. I cannot now form the most remote conjecture as to the cause of it. We must not I find now refer it to the sand falling into a hollow, that might produce a sound but could never cause the prolonged *vibrations*, as it were of some huge harp string. I shall not venture on any speculation, but, having carefully noted the facts, I shall lay them, on my arrival in England, before some wiser head than my own, and see if he can make any thing out of them."

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of May, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.			Observations at 4 P. M.							Calculated Humidity.			Register Thermometer extremes.		Rain.	Wind.		Weather.	
	Old Stand. Barometer at 32°.	New Stand. Barometer (Bunt's).	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Old Stand. Barometer at 32°.	New Stand. Barometer (Bunt's).	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Cold on roof.	Heat in sun's rays on roof.		10 A. M.	4 P. M.	Morning.	Evening.
1	29,769	29,	9,0	9,1	8,7	74,7	87	65	72	60	29,627	29,	93,3	12,7	12,2	72,1	80	55	59	52	79,8		1,20	se.	sc.	cumuli.	threatg.
2	,820	,,	3,4	4,8	5,0	76,4	91	80	80	80	,692	,,	91,2	14,1	11,0	72,2	84	55	66	55	69,0		1,25	o.	se.	overcast.	hazy.
3	,832	,,	1,3	9,2	8,4	74,0	86	66	70	81	,670	,,	90,3	13,9	13,7	72,0	81	49	61	57	66,2			ne.	E.	do	cumuli.
4	,769	,,	5,3	9,0	9,0	73,9	88	62	74	70	,610	,,	83,2	8,2	7,3	71,7	89	65	76	70	67,9		0,05	ssw.	sw.	cir. cum.	nimbi.
5	,838	,,	3,1	6,4	5,3	74,1	92	72	82	75	,708	,,	88,8	11,5	10,2	74,4	85	51	68	52	73,2			se.	sw.	cir. stra.	cumuli.
6	,846	,,	5,6	7,3	6,4	74,0	91	70	80	70	,708	,,	92,9	15,5	15,1	68,9	78	45	56	47	70,8			sw.	sw.	cir. stra.	fine.
7	,820	,,	7,4	7,4	6,6	76,8	92	70	82	72	,700	,,	94,0	11,2	11,0	77,5	85	60	69	59	78,9			S.	se.	cum.	do
8	,782	,,	8,0	7,2	6,0	77,8	91	71	80	73	,622	,,	96,4	14,4	14,0	76,3	80	51	59	53	73,0			sw.	s.	fine.	do
9	,853	,,	3,7	6,7	5,3	73,0	95	71	89	71	,712	,,	92,5	16,7	17,0	68,8	75	39	51	48	71,3		,50	N.W.	E.	drizzle.	overcast.
10	,831	,,	6,1	6,9	6,3	75,2	91	71	86	71	,720	,,	89,7	10,5	10,2	73,1	85	60	68	58	74,8			W.	sw.	cloudy.	threatg.
11	,794	,,	8,1	14,3	13,0	67,8	78	45	56	53	,656	,606	96,2	20,6	19,4	71,5	71	34	45	46	76,7			S.	S.	do	clear.
12	,756	,,	9,7	7,9	6,7	77,5	90	70	78	68	,665	,534	98,3	21,9	20,3	68,7	67	31	40	40	80,0			sw.	s.	clear.	hot wind.
13	,684	,,	0,7	12,0	11,3	74,8	82	55	63	61	,522	,471	100,4	27,7	28,6	66,6	60	19	31	35	79,0			Ssw.	sw.	do	clear.
14	,690	,,	0,1	10,1	10,1	75,2	87	62	72	72	,547	,492	98,6	19,4	19,6	71,6	74	37	49	43	80,0			S.	S.	do	do
15	,686	,,	1,2	9,3	9,3	77,7	88	65	74	67	,544	,484	99,1	19,2	19,3	73,0	75	37	51	44	79,8			sw.	s.	do	clear.
16	,670	,,	1,3	9,0	9,4	77,3	88	68	74	65	,565	,505	96,5	11,5	12,0	78,0	85	60	68	57	82,3			S.	sw.	do	clear.
17	,713	,,	0,2	7,0	8,2	77,7	90	70	78	69	,570	,492	98,3	14,7	16,0	76,6	80	51	59	51	80,0			se.	s.	do	fresh breeze.
18	,709	,,	1,0	8,3	9,1	77,2	89	68	76	65	,569	,498	94,9	12,7	12,7	74,5	82	55	63	52	79,0			s.	S.	do	cloudy.
19	,647	,,	9,4	9,2	12,0	73,0	84	62	66	60	,534	,454	95,6	17,5	17,8	71,8	75	40	51	48	75,0			sw.	sw.	fresh breeze.	clear.
20	,597	,539	90,1	9,5	9,6	75,6	89	64	76	64	,512	,434	94,6	14,8	14,5	74,6	90	50	59	52	73,6			s.	sw.	cumuli.	fresh breeze.
21	,624	,566	90,0	10,4	10,6	75,0	87	60	72	62	,505	,441	95,0	15,9	15,5	75,0	79	47	57	49	78,5			S.	sw.	do	hazy.
22	,640	,584	90,9	10,6	10,6	74,4	85	60	68	59	,553	,487	96,3	14,9	14,4	73,8	80	50	59	50	79,0			w.	sw.	cum. stra.	fine.
23	,669	,609	92,3	11,7	11,7	76,0	85	57	68	60	,576	,499	95,5	13,9	14,2	74,3	82	52	63	51	85,0			sw	s.	do	do
24	,692	,625	90,6	10,2	10,6	74,0	87	58	72	60	,575	,495	96,3	17,4	16,8	73,7	76	41	52	50	81,0			sw.	sw.	do	do
25	,715	,655	91,3	11,3	11,3	75,2	86	58	70	60	,626	,544	95,8	11,6	14,7	72,7	81	50	61	48	79,6			sw.	sw.	do	do
26	,743	,689	91,3	10,7	11,5	75,6	87	60	72	60	,642	,588	95,0	13,4	14,6	73,7	81	51	61	51	76,5			w.	sw.	cir. cum.	fresh breeze.
27	,683	,631	91,4	10,1	10,4	75,7	88	62	74	61	,604	,542	94,5	15,2	15,0	71,2	79	47	57	48	83,0		,05	sw.	S.	cir. stra.	do
28	,616	,575	90,4	9,3	1,0	75,0	89	65	76	61	,515	,460	94,1	11,7	12,0	76,0	87	58	72	57	85,0			sw.	sw.	do	haze.
29	,553	,498	90,4	7,7	8,2		92	70	82		,420	,366	94,5	11,5	11,4	76,8	86	59	70	60	83,0			sw.	s.	do	fresh breeze.
30	,467	,416	92,2	7,5	8,2	76,5	92	72	82	61	,360	,293	97,1	12,4	12,6	76,0	84	57	66	38	83,0			s.	s.	clear.	cumuli.
31	,494	,423	93,3	8,6	9,3	76,6	90	68	78	59	,378	,302	100,1	14,8	14,6	75,7	80	52	59	47				s.	s.	do	very hot.
Mean	29,709	,660	89,0	9,0	8,9	75,2	88	64	74	65	29,585	,523	94,8	14,9	14,7	73,2	79	49	59	50	77,8	Thermometer broken.	3,05	South.		Very hot.	

Finding so great a discrepance in the tension shewn by the hair hygrometer I have recompared the hundredth degree or extreme moisture and find it to reach 102.5 which will necessitate a correction of the tensions to the amount of about 6 per cent. being a new hair, it had not become properly stretched when first set up.—J. P.

JOURNAL

OF

THE ASIATIC SOCIETY.

No. 66.—*June*, 1837.

I.—*Some account of the Wars between Burmah and China, together with the journals and routes of three different Embassies sent to Pekin by the King of Ava; taken from Burmese documents. By Lieutenant-Colonel* H. BURNEY, *Resident in Ava.*

[Continued from page 149.]

In the 30th No. of the *Gleanings of Science* I have given some account of the Chinese caravans, which come principally from *Theng-ye-show* and *Tálí-fú* in *Yunan*, not only to *Ava* but to all the Shan towns subject to *Ava*, *Maíng:Leng-gyíh*, *Kyaíng:toŭn*, *Theinní*, *Mó:né*, *Thibó*, &c., as well as to *Zenmay* and the Shan towns subject to *Siam*. A party of Chinese also annually proceed from *Santá-fú* to *Mŏ:gaung* and *Payen-dueng* for the purpose of procuring amber and the noble serpentine, or the stone so much prized by the Chinese and called by them *Yú*.

The emperor of *China* appears never to have surrendered the *Tsó:-buás* of *Theinní*, *Bamó* and *Mŏ:gaung* agreeably to the terms of the treaty of *Bamó*; nor can I find a notice of any correspondence between the sovereigns of the two countries until the reign of the present king of *Ava's* grandfather, MEN:DARÁ:GYÍH, Symes's MINDRAGEE. That monarch, shortly after he put his nephew to death and seized the throne in the year 1781, appears to have deputed a small party for the purpose of opening a communication with *China*, but the envoys were seized by the Chinese and sent up to the north of *Pekin*, to the Tartar province of *Quantong*. In 1787, however, an embassy came to *Ava* from *China*, and I will now give a free translation of the journals and routes of three different embassies, which were sent to

Pekin by the late and present kings of *Ava*. But before giving these translations it may be proper to explain the system which I have adopted, for writing Burmese and Chinese names in the Roman character.

I have followed, as far as I was able, Sir WM. JONES's system, excepting that I have used the prosodial long and short signs, instead of the acute and grave accents, for denoting long and short vowels*; The Burmese have a very bad ear for discriminating new sounds, and, unfortunately, their written character will not admit of their writing or pronouncing many foreign words. They can write *ing* only as ၎, *ín*, *en* or *eng*; *ang* as *en* or *eng*; *ong* as *oŭn*, and *f* as *ph*, or *bh*. *R*, they seldom sound but as *y*, and they use a soft *th* for *s*. A final *kg*, or *t*, is often scarcely sounded, if not entirely mute, and I denote this by underlining such letter. The Burmese also change the sound of the initial letter of the second or third syllables of compound and derivative words, sounding *b* as *p*; *k* and *k,h* as *g*; *t* and *t,h* as *d*; and *ts* and *tsh*, as *z*. But in copying Chinese names from the Burmese, I have always given the legitimate sound of all such letters in the Roman character. The Chinese, according to DU HALDE, have an *h*, so strong, that it is entirely guttural, and the Burmese envoys apparently attempt to express this Chinese sound of *h*, by the double consonant *sh* or *shy* of their own alphabet. The Burmese do not sound the two letters which they have derived from the Devanágari च, छ, as *cha* and *ch-ha*, which the Siamese and Shans do, but as a very hard *s*, and its aspirate, pronounced with the tip of the tongue turned up against the roof of the mouth, and best expressed, in my opinion, by *ts* and *tsh*. The Chinese appear to have the same sounds, expressed by DU HALDE by the same Roman letters *ts*, and *tsh*; the first of which, he observes, is pronounced as the Italians pronounce the word *gratia*. For the Burmese heavy accent, marked something like our colon (း), and used to close a syllable, when ending in a vowel or nasal consonant, with a very heavy aspirated sound, I have used two *points* in the middle of a word, and the letter *h*, usually, at the close. Our prosodial short mark will best express the Burmese accent marked as a point under a letter, and intended to give a syllable a very short sound. All the Burmese envoys write the names of the Chinese

* Those accentual marks being best adapted for describing the peculiar high and grave tones, in which the same letters are sounded in the Siamese and Shan languages. [We have, however, for want of type been obliged to adhere to the accented system—the absence of an accent denoting the short and its presence the long sound.—ED.]

cities of the first second and third class in Burmese, as *p,hu,* or *b,hu, t,sú,* or *tso,* and *shyen ;* but I have set down these names as they usually appear in our maps of *China,* as *fū, chow* and *hien.*

The following table will show the power of the vowels as used by me.

a, as in America.

á, as in father.

e, as in men.

ê, broad as *ey* in they, or *ay* in mayor, or *a* in name.

i, as in pin.

í, as in police, or *ee* in feet, and a.

ì, the same with a grave sound like *e* in me.

o, as in toto.

ó, the same sound prolonged, or as in lone, sown.

ô, broad as in groat.

ô', the same sound prolonged.

u, as in Italian, or like *oo* in foot.

ú, the same sound prolonged, or *oo* in mood.

The Siamese and Shan letter, which is sounded something like the French letters eu, I mark, as the Catholic Missionaries in *Siam* have long marked it, thus, u' and ú'.

ai, au, ou, ei, uo, } Each of these vowels is pronounced as when separated excepting that the sound of the second is a little more prolonged than that of the first vowel. Kaing, Ka-ung, Ko-un, mĕ-in, yu-on.

The letter *ng* is pronounced something like the same letters in the French word magnanimité, but as a final, it is usually sounded as a nasal *n*. When followed by the heavy accent I have usually expressed the g, in the Roman character.

The prosodial short sign is used to shorten the sound of some of the above vowels and diphthongs.

According to the above system I have nearly completed a comparative vocabulary of the Burmese, Siamese, Taung-thú and three Shan dialects.

Of the towns and places in *China* mentioned by the Burmese envoys in their journals and routes, I shall set down within brackets the proper names of such as I can trace in Du Halde.

In the year 1787, intelligence was brought to *Ava*, that an embassy from the emperor of *China* had arrived at *Theinní*, and as the ceremony of the public audience given to these ambassadors corresponds in

many points with that observed at the audience given by the present king of *Ava* to the British Resident, on his first arrival at *Ava* in 1830, I extract a description of it from the 33rd volume of the Burmese Chronicles:

"On Tuesday, the 3rd of April, 1787, the king of *Ava* (MEN:DARA:-GYI'H) received a report from the Tsò:buáh and officers of *Theinní*, that a Chinese embassy, consisting of upwards of 300 men with E-TSHÒ:YE' as the chief envoy, had arrived at *Theinní*, with a letter on gold and costly presents from the emperor of *China*, for the purpose of establishing peace and friendship between the two great countries. His Majesty ordered the Chinese embassy to be conveyed to the capital (at that time *Amarapúra*) by the road leading from *Theinní* through *Thíbô*, *Maing:toŭn*, *Maing:kaing*, *Yauk-zauk*, *Pwê-lha*, and *Yuá:ngăn*, down by the *Nat-t,heit* pass and the road along the southern paddy lands (*Taung-bhetlay*).—The Chinese mission accordingly left *Theinní* on Sunday, the 6th of May, 1787, and on reaching *Nyaung-ní-beng* (red *pepul* tree), embarked in boats (on the *Myit-ngay*) and came to *Yan-aung* ghât at *Amarapúra*, where they landed and took possession of the buildings constructed for their accommodation. The emperor of *China's* letter was duly translated on Tuesday, the 29th May; and on Sunday, the 3rd of June, the embassy was received by the king in the following manner:—

"The streets and lanes of *Amarapúra* having been ornamented, the officers of the Lhuot-tô and Yoŭn-dô*, dressed in their uniforms with earrings, having taken their proper places within those buildings; the white elephant, and Shue-wen, the elephant rode by the king, and other elephants with all their trappings, on being drawn out, and the body guard and other troops formed in front of the Lhuot-tô and hall of audience, and within the court-yard of the palace, the Chinese ambassadors were brought from their house at the *Yan-aung* ghât in the following order:—First, two officers with long rods; then musqueteers to the right and left; then, seated upon an elephant, the king's writer, YANDA-MEIT-GYÔ-DEN, dressed in full uniform, bearing an octagon betel cup containing the emperor of *China's* letter; next a sedan chair with the box containing the images of *Byamhá*; then a sedan chair with a box of royal presents; then another sedan chair with another box of presents; then ten horses intended as presents; and then followed the principal Chinese ambassador, E-TSHÒ:YE', mounted on an elephant with housings of scarlet broad cloth edged with silk. After him came four of the junior envoys on horseback; and after them, the officers appointed to escort the mission.

"The procession entered the *Tset-shyen* gateway on the western face of the city, and stopped on reaching the Yoŭn-dô. The box bearing the royal letter was deposited on a fine white mat with an ornamental border spread in the verandah of that building, where the ambassadors also were

* The house in which the ministers of state assemble and the Court of justice.

placed, the royal presents being arranged on each side. The princes of the blood and the other great officers of state then passed into the palace in state, surrounded by their respective suites and with all their insignia of rank. Last of all passed the heir-apparent, the glorious AIN-YE-MENG. When all was quiet the ambassadors, preceded by the royal letter and presents, were taken in, the ambassadors being made to stop and bow their heads repeatedly along the whole road in the usual way*. The king's writer bearing the box containing the royal letter, stopped not far from the eastern steps of the hall of audience, when a Thăn-dô-zen† went down and took the letter up, and placed it on a white mat that was spread for the purpose. The ambassadors ascended by the northern steps, and took their seats at the appointed place; whilst all the presents were put down on the ground in front of the hall of audience. The whole being assembled, the lord of many white elephants, the lord of life, and great king of righteousness, wearing the *Mahá-muni* crown of inestimable value, and the principal queen, dressed in the *Gana-matta-pa-kua* jewel, surrounded by all the other queens and concubines, came forth, and on the *U-gen* folding doors being opened by the princesses, his majesty the king and the principal queen took their seats on the *Thíhásthana yázá* throne. The state drum, beat when his majesty comes out, was then struck three times forcibly and three times gently, and the whole band played. When the music ceased, the eight consecrating Bráhmans performed the customary ceremony of consecration, and the flowers and water presented by the Bráhmans, were received by BAUNG-DÔ-PYEN and NANDA-THEN Khaya in a gold cup ornamented with the nine precious stones.

"The Ná:khăn-dô‡, ZEYA NÔRAT.HA, then brought to the king's notice seven images of BUD'DH which his Majesty was to give in charity. His Majesty observed, 'Let the royal gift be suitably escorted and delivered;' which order was repeated by the Ná:khan to the Shue-tait-wún, who after ordering the royal drum to be beaten, conveyed the images out of the hall of audience.

"The Thăn-dô-găn§, MENG-NGAY-THIRI, then came up the steps used by the king, and kneeling at the usual place, read out a list of the royal presents. The Ná:khăn-dô, KYÔ-ZUA'NÔ-RAT.HA', next proceeded right in front of his Majesty, and kneeling, read out from an ornamented book, the following translation which had been made of the emperor of *China's* letter.

'The elder brother, UDI' BUA'‖, (emperor of *China,*) who rules over the great kingdoms to the eastward and a multitude of umbrella-wearing chiefs, addresses affectionately his younger brother, the lord of the white, red and mottled elephants, who rules over the great kingdoms to the westward and a multitude of umbrella-wearing chiefs, lord of the amber

* The British resident refused to make these obeisances.

† Register of royal orders.

‡ Royal bearer or reporter. § Receiver of royal mandates.

‖ Udi, I am told, means east in the Páli language.

mines, the sun-descended king and master of the golden palace. The ancestors of the two brothers have inherited and ruled in succession in this *Zabūdipā* island, lying to the southward of *Myen:mō* mount, from the first creation of the world; and the two brothers are enjoying in the eastern and western great kingdoms, prosperity equal to that of the Thagyá:-Nat*, with very great glory, power, and authority. From the time even of our ancestors there has been no enmity. The younger brother, the sun-descended king, is an independent sovereign, receiving the homage of great kingdoms, and of an hundred umbrella-wearing chiefs. The elder brother also is an independent sovereign, receiving the homage of great kingdoms, and of an hundred umbrella-wearing chiefs. If the two brothers enter into a permanent agreement and friendship, conformably to the union which has subsisted between them uninterruptedly in former states of existence, it will be like a nail driven in (as firm) to their posterity. The elder brother, who possesses the great kingdoms, and the golden umbrella and palace to the eastward, as well as his queen, sons, daughters, nobles, officers, and the inhabitants of his country, are in the enjoyment of health, peace, and happiness; and he desires to learn, that his younger brother, who possesses the great kingdoms and the golden umbrella and palace to the westward, the master of the golden palace, as well as his queen, eldest son, the heir-apparent, his other sons and daughters, nobles, officers, and all the inhabitants of his country, are also in the enjoyment of health, peace, and happiness.

'For one reason, because friendship has existed from former states of being; and for another, because the elder loves the younger brother, he sends, with a royal letter on gold, a piece of gold, and desires that two pieces of gold may become like this one piece. It is now seventeen years since the gold and silver road, and gold and silver bridge have not been opened or traversed between the elder brother and younger brother, pursuant to the arrangement made in 1769, that ambassadors of rank should pass between the two great countries, in order that a sincere friendship and esteem might arise. When friendship has been established between the two great countries, each must receive favors from the other. The elder brother has in front of his palace and worships eight images of BYAMHA'†, which it has been the custom to worship from the creation of the world; but loving the younger brother, and desiring that he should worship in the same manner, the elder brother presents these images to the younger. If the younger brother worships them, his glory and power will be as resplendent as the rising sun. The son of the lord of *Kaing:muh*, who wears

* This is the Chinese *Tien*, or *Shang Tien*, lord of heaven, and the same as the Hindu god *Indra*, one of whose names, *Sugra*, although written in Burmese *Thugrá*, is pronounced *Thagrá*.

† Byamhá, written Bramhá, is a being of the superior celestial regions of the Buddhists.

a red umbrella and is always near the person of the elder brother, is sent to the younger brother with a royal letter on gold, and with the following presents:—

Eight images of *Byamhā*, cast in gold.
Eight carpets.
Ten pieces of gold cloth.
Ten horses.

'Let the younger brother, master of the golden palace, delay not after the arrival of this ambassador in his presence, to appoint ambassadors on his part, and send them with a royal letter on gold. When the son of the lord of *Kaing:mah* returns to the elder brother, it will be the same as if the royal countenance of the younger brother, the master of the golden palace, has been seen.'

"After the Nā:khăn-dô KYÔ-ZUA'NÔ-RAT,HA' had read out the above royal letter, his Majesty said, 'E-TSHÔ: YE', how many days were you coming from the capital of *China* to *Amarapúra* ?' The Nā:khăn, PYÔ-GYÍN-MHU', repeated the question to the Chinese interpreter, who translated it to the ambassador. The ambassador replied: 'Your Majesty's slaves, owing to your Majesty's excellent virtues, were one hundred and sixty-four days coming from the capital of *China* to your Majesty's feet.' This answer was translated by the Chinese interpreter to the Nā:khăn-dô, who submitted it to his Majesty. The king then said: 'E-TSHÔ: YE', when you quitted the capital of *China*, were my royal kinsman, the emperor of *China*, and his queen and children, and relatives all in good health?' The question was communicated to the ambassador as before, and the ambassador replied: 'When your Majesty's slaves quitted the capital of *China* for your Majesty's feet, your Majesty's royal kinsman, the emperor of *China*, and his queen, and children, and relatives were all in good health;' which answer was submitted to the king in the same manner as before. The king then said: 'E-TSHÔ: YE', go back quickly; the emperor of *China* will desire to receive intelligence of every thing in this country.' This order was communicated as before to the ambassadors, who bowed down their heads. The king then presented the principal ambassador, E-TSHÔ: YE, with five hundred ticals, a silver cup weighing eleven ticals, a ruby ring weighing one tical, and of the value of one hundred and fifty ticals, a horse with saddle and bridle complete, ten cubits of scarlet broad cloth, five pieces of cotton cloth, five pieces of handkerchief, one piece of chintz, two large lacquered-ware boxes, and one small one. To each of the four junior ambassadors his Majesty presented at the same time three hundred ticals, one silver cup weighing eleven ticals, one ruby ring weighing half a tical, and of the value of one hundred ticals, five cubits of scarlet cloth, two pieces of handkerchief, two pieces of chintz, a horse with saddle and bridle complete, a carpet, one large lacquered-ware box, and two small ones.

"The silver gong was then struck five times, and the drum, which is used when his Majesty enters the palace, was beaten, and his Majesty retired.

The ambassadors were first conveyed from the hall of audience to the eastern *Foum*, where they were made to stand until the princes and all the nobles and officers passed to their respective houses*; after which they were taken to the house allotted for them, by the same route as that by which they had been before brought.

"On Sunday, the 10th June, 1787, his Majesty addressed the following letter and presents to the emperor of *China*, and appointed LET-YUE:GYI'H MHU':, NE-MYO:SHUE-DAUNG, THÍHAGYÔ-GAUNG, and WELUTHA'YA, ambassadors on his part, to proceed to *China* in company with the Chinese ambassadors.

'The protector of religion, the sun-descended king of righteousness, bearing the name and title of *Thīri pawara wizayā nanta yatha tiri bawanā dītiyā dipadi pandita mahā dhamma rājā-dīrāja*†, owner of the white, red, and mottled elephants, and proprietor of mines of gold, silver, rubies, and amber, who rules over the great kingdoms and all the umbrella-wearing chiefs of the westward, affectionately addresses the royal friend, the lord of the golden palace, who rules over the great kingdoms and all the umbrella-wearing chiefs to the eastward. No enmity having existed between the two great eastern and western kingdoms from the first creation of the world, and both being independent sovereigns who have possessed a golden umbrella and palace from generation to generation, and the homage of a multitude of umbrella-wearing chiefs, the royal friend deputed the son of the lord of *Kaing:mah*, who arrived at the great and golden city of *Amarapúra* on the 26th May, 1787. The royal letter and the presents consisting of eight images of the *A'batthara*‡ *Byamhā*, ten carpets, ten pieces of gold cloth and ten horses, having been arranged in front of the throne and hall of audience, his Majesty, attended by the heir-apparent, his royal brothers and sons, and all his officers, came forth and sat on the throne, and caused the royal letter to be read out. His Majesty was exceedingly pleased to hear, that if a friendship like the union which has always existed in former states of existence between the kings of the two countries, and an agreement as fixed and permanent as a nail driven in, be entered into, it would be to posterity from generation to generation like two pieces of gold converted into one (as inseparable); and also, that the royal friend, the lord of the golden palace himself and his queen, royal children, and relatives and all his officers are in the enjoyment of health. The royal friend, lord of the golden palace, who rules

* The British Resident returned at once to his own house from the hall of audience.

† The meaning of the *Páli* words of this long title is thus rendered by the Burmese.—"The illustrious, excellent and greatest conqueror, whose glory is boundless and substantial, who will rule over the three orders of beings with surpassing power, the wise and great king of righteousness, the king of kings."

‡ Abatthara is the sixth of the 20 stages or stories of the superior celestial regions.

over a hundred umbrella-wearing chiefs to the westward, is also in the enjoyment of health as well as his queen, heir-apparent, royal children, and relatives, and all his officers. Friendship which had always existed in former states of existence, is now become a royal friendship. When the two great countries have established friendship, each must receive favors from the other. The eight images of *A'batthara Byamhá* which were sent with a desire that they might be worshipped by the royal friend, have been placed in a proper and suitable manner in front of the palace, under pyramidical buildings covered with gold and silver. Desire is also felt that approbation be given to the merit of constantly upholding and protecting the religion of the deity (GAUDAMA), who is full of glory and power, who can give relief to the kings of men, *Nats*, and *Byamhás*, who has no equal in the three worlds, and who has been worshipped from generation to generation by the sun-descended independent kings, that have ruled over the great kingdoms to the westward. NE MYÓ-SHUEDAUNG, a nobleman who is in the immediate service of the royal friend, and THÍHA GYÔ-GAUNG and WELUTHA'RA have been appointed ambassadors to accompany the son of the lord of *Kaing:mah*, and are deputed with a royal letter on gold and with royal presents, consisting of four elephants, one hundred *viss* weight of elephant's teeth, an ivory helmet surmounted by a ruby, and another encircled with rubies and surmounted by a sapphire, two ruby rings, one sapphire ring, one *viss* weight of Mobye stone, one piece of yellow broad cloth, one piece of green broad cloth, ten pieces of chintz, ten pieces of handkerchief, ten carpets, one hundred books of gold leaf, one hundred books of silver leaf, ten *viss* weight of white perfume, four large lacquered ware boxes, and fifty small lacquered-ware boxes. Let the ambassadors return quickly and without delay, and when they return, it will be as if the royal friend had been met, and *conversed with.*'"

On the return of these Burmese ambassadors from *Pekin* in the beginning of the year 1789, they submitted a report of their proceedings, of which report the following is a free translation :—

"We left *Amarapúra* on the 24th June, 1787, and in twelve days' journey, on 6th July, arrived at the city of *Theinní*, where we stopped nine days for the purpose of recruiting the elephants intended as presents for the emperor of *China*. On the 16th July, we left *Theinní**, and in fifteen days' journey reached *Kaing:mah*, where we stopped more than five months, and transmitted to the golden feet a report of certain discussions, which took place between us and some Chinese officers there. On receiving his Majesty's orders that we should proceed, we left *Kaing:mah* on the 12th January, 1788, amounting altogether to one hundred and twenty-five men ; and on the 23rd arrived at the city of *Shuen-lī*, which the Shans call *Maing:Tsān*†. Here we met two officers, Tsoŭn-shue and Titāyīn, whom the Tsoŭntū or Governor General of *Yunan* had deputed to meet us ; and a report of our discussions with whom we forwarded to the golden feet.

* Shan name *Mông Seavi*. † *Mông Chan*.

We had to wait again for more than five months, whilst the Tsoŭntū sent a report of our arrival to *Pekin*. On the 25th June, 1788, the governor of *Maing:Tsăn* received a letter from the Tsoŭntū, ordering him to let the Burmese ambassadors advance; and on the following day, attended by the governor K,HUA'-TA'-LÔ:YE' and interpreter WU'N-TSOU'N-YE' with one hundred men, we left *Maing:Tsăn*, and on the 1st July reached the city of *Tāthí (Tali ?)*, where the Tsoŭntū came from *Maing:Tshì (Yunan)*, on the 12th July, to meet the royal letter and presents. On the 21st July, orders from the emperor of *China* reached the Tsoŭntū, who informed us, that he had received the imperial orders to allow the ambassadors to proceed, and that the emperor had also ordered, that the envoys who had come from the great western country, from the royal friend and lord of the golden palace, should be conveyed to *Pekin* in fifty-one days; and that the Tsoŭntūs, governors, Títūs and officers, along the whole route, should treat the ambassadors with every respect, and at the regular stages supply them with provisions, and entertain them with music, plays, &c. The Tsoŭntū further said, that similar orders had been sent to all the other officers along the route, and that he would prepare some presents for his Majesty the king of *Ava*, which he desired we should forward by some proper persons with a report of our proceedings. We accordingly sent DANUTAZAUNG:YE' and TSET-YAN-NHAING to *Amarapúra* with the Tsoŭntū's presents, and left *Tāthī* on the 23rd July with thirty-seven men, attended by TAUKTAIT HÔTA'-LO:YE', KHUA'-TA-LO:YE', and the interpreter WUN-TSOU'N-YE'. In seven days' journey we reached the city of *Maing:Tshì (Yunan)*, where we stopped one day, and then continuing our route, reached the city of *Kŭetsō (Kue-chow)* in nine days' journey, on the 8th August, 1788. On the 12th we came to the city of *Tsīn-yuen-fŭ* dependent on *Kue-chow*, where, on the following day, we embarked in boats and dropped down the stream until the 20th, when we disembarked at the landing place at *Rīyen* or *Yī-yen*, and continued our route by land. On the 22nd August, we came to the city of *Tsheng-shyā-fŭ* in the district of *Hūnăn*, and in eight days' journey more to the city of *Wŭ-tsheng-fŭ* in the district of *Hupé*. On the 12th September, in thirteen days' journey, we came to the city of *Tshī-chow*, beyond the district of *Hônăn* and in that of *Tsŭtlì (Petcheli)*. In seven more days, on the 19th September, we reached *Pauk-tīn-fū*, the principal city of *Tsŭtlì*, and on the 23rd reached the city of *Lukō Khyauk-ken**, six miles distant from the capital, *Pekin*. The emperor not being there but at *Yé:hô*† in *Tartary*, seven days' journey to the north-east of *Pekin*, we left the city of *Luko Khyauk-ken* on the 14th, and in three days came to the boundary of *Tartary* to the *Hŭ-pé-khé* fort‡ line of wall. In two days more we came to the city of *Lănphyīn-hien*, where the chief of the chokey met us, and taking a

* *Ken* is a chokey in Burmese.

† DU HALDE'S *Gehol*, and Sir G. STAUNTON'S *Zhe-hol*.

‡ DU HALDE'S Coupe keon Fort ?

list of the presents, proceeded to make his report to the emperor of *China*. The treasurer having come with the emperor's orders for us to advance, we entered *Zhe-hol* on the 29th September, 1787, and were lodged on a high plain to the westward of the city.

" On the 30th September we proceeded by invitation to meet the Wún-gyíh Hô-TSOU'N-TENG*, who wears two peacock's tail feathers with red on the top of his head-dress, (red button on his cap,) and KOU'N-YE'-THU' and THÍ-TA'-YÍN who wear two peacock's feathers with a ruby on the top of their head-dress. The Wún-gyíh told us:—'Our master, the emperor, is much pleased at the arrival of the ambassadors, and will receive the royal letter and presents so soon as to-morrow, when the ambassadors also will see him and be interrogated by himself. You must be in waiting at 6 o'clock to-morrow morning when the emperor comes out, and you must bring the band of music, which he has heard you have with you.' On the following morning we were in attendance in front of the palace before the emperor appeared. He came out about 7 o'clock, when the royal letter and presents were delivered by us, and the Wún-gyíh Hô-TSOU'N-TENG and KOU'N-YE'-THU' and THÍ-TA'-YÍN in the midst of all the officers of the Court. The emperor spoke as follows in the Tartar language to the Wún-gyíh, who repeated it in the Chinese language to the interpreter, and he communicated it to us:—'The two great countries were always friends in former times, and owing to a little difference which happened once, no letters or presents have passed. But now, a mutual intercourse and good understanding prevails, and friendship has been re-established. I am exceedingly glad to hear that my royal friend, the Lord of the golden palace, fulfils his religious duties and cherishes all the inhabitants of the country as if they were the children of his own bosom. Let the ambassadors submit all they have to say.'—We replied, 'Your majesty's slaves will submit to our royal master all your majesty's orders; and communicate to the Wún-gyíh Hô-TSOU'N-TENG, and to KOUN'-YE'-THU' all we have to represent.'

"The emperor then said, 'Let them convey to my royal friend, in order that he may worship as I do, this *Shikyá Muní* image, the representative of the Deity, which has always been worshipped in our palace,—this figure of the Deity, embroidered in silk, and this *Yu-yuí* jewel (sceptre?) which I always carry in my hand.' The Wún-gyíh Hô-TSOU'N-TENG and KOU'N-YE'-THU' brought and delivered the same to us. We then made our band of music play before the emperor, who approved of it and said it was very pleasant. After his majesty had conferred presents on different great and subordinate officers, we were placed in the same line with the 48 princes of *Tartary*, and allowed to see an entertainment, (Chinese play.)

* This is evidently the same person, who was the first minister of the empire during Lord MACARTNEY'S embassy, and who is styled by Sir G. STAUNTON, "Hoo-choong-taung Colao."

"On the 3rd October we went again, and were placed in the same line as before, and shown a complete entertainment. The emperor of *China* seated us at a table, at which we ate and drank in company with the 48 princes of *Tartary*. We conversed with the Wún-gyíh HÔ-TSOU'N-TENG and KOU'N-YE'-THU' and THÍ-TA'-YÍN, and observed:—'Friendship has now been established between our two royal masters. The great officers on each side, bearing in mind the favors they have received from, and the duty they owe to, their respective masters, have only to submit what they may be satisfied will conduce to the permanent advantage of their royal masters and their posterity. We, who have been deputed, will return as quickly as possible, and in conformity with the qualifications required from ambassadors*, will submit to our royal master every circumstance relating to the emperor of *China*. There are certain Shan Tsôbuahs and their followers, subjects of our master, and some men who were formerly deputed, still remaining in this country. And the road on the frontier of the two countries is much molested by bad men and criminals;—if means are adopted on both sides for putting an end to this evil, the two countries will become like one, and the gold and silver road will be opened.' The Chinese officers replied:—'The observations of the ambassadors are very correct. Our master, the emperor, is much pleased at having re-established friendship with the Lord of the golden palace, who rules over the western country. His majesty has given to the king of *Ava* an image of him, who is without an equal, and is superior to the three races of beings, (men, *Nats*, and *Byamhás*,) and who has been worshipped uninterruptedly by all the emperor's ancestors; and he has permitted the ambassadors to communicate, without reserve, all they may have to say. He has seated the ambassadors also on the same line with his own relations, the 48 princes of *Tartary*, and repeatedly questioned, and spoken to them. All the points you have represented will be properly settled. When we go back from *Zhehol* (to *Pekin*), we will exert ourselves to have the whole settled, and will submit that you may be speedily allowed to return.'

"On the following day we were invited to attend the emperor, who was going to visit a monastery. We went early, and were desired by the Wún-gyíh HÔ-TSOU'N-TENG to wait on the road, and when we saw the emperor coming out on horseback, to remark what a strong hale man his majesty must be, to be able to ride at 80 years of age without being fatigued. We waited on the road accordingly, and on seeing the emperor, spoke as we had been instructed. HÔ-TSOU'N-TENG asked what the ambassadors had said, and when the interpreter translated our remarks into Chinese, the Wún-gyíh repeated it to the emperor.

"The emperor, on going to the monastery, entered by the southern arched gateway, and came out by the western, and returned to the city by its southern gateway. LU-TA'-YÍN was appointed to attend us and shew us all the different images and temples. But all the different figures

* See a subsequent note for a list of these qualifications.

shewn to us were representations only of our deity, and observing that those varying in form were copied from various forms which GAUDAMA had assumed when in this world, we bowed down and worshipped them. There were seven monasteries. In that first shewn to us, there were 200 priests dressed in yellow, and in another to the westward about 500.

"On the 6th October we were invited to an entertainment given in some temporary buildings in a garden. We went before 6 o'clock, and the emperor came about half past 7 in an open sedan chair. He was dressed as follows:—On the top of his head-dress there was a pearl; on the four sides of his silk dress there was the figure of a dragon, and round his neck hung a string of pearls. He took his seat on a royal chair of the form of a dragon, and about a cubit high, and the officers of his court presented to him cups of spirits and cups of milk. The Wún-gyíh HÔ-TSOU'N-TENG and KOU'N-YE'-THU' and THÍ-TA'-YÍN stood on the right and left of the emperor with swords in their hands. To the right and left were placed tables with all kinds of cakes, and we sat down on the right hand with the Wún-gyíh HÔ-TSOU'N-TENG behind the chiefs of the 48 Tartar countries, and ate and drank. After the soft music and dancing, which were according to the Chinese, Tartar, and Kulá fashions, the emperor returned home. The silks and gold cloths, which had been arranged on the left hand, were distrib uted in presents to the princes of *Tartary*, and those on the right hand were distributed by the Wún-gyíh KOU'N-YE'-THU'* to us according to our respective ranks, and to the officers appointed to take care of us. All kinds of curious cloths, &c. intended for presents to the king of *Ava*, were also shewn and delivered to us.

"A little after 3 o'clock, on the afternoon of the same day, the emperor of *China* again came out, and we saw an exhibition of tumblers on poles, and fireworks, and then returned home.

"The emperor having directed us on this last day to go to *Pekin*, we left *Zhehol* on the 7th of October, and arrived at *Pekin* on the 12th October, taking up our residence in some temporary buildings erected on a plain within the southern gateway of the city, where we were attended and supplied with provisions by the same men as before.

"On the 13th, the emperor having directed that the ambassadors should be lodged near him, and that their provisions should be supplied from within the palace, we moved, on the following day, and took up our residence on a royal plain†, near the road leading to the southward from the western gateway of the wall surrounding the palace. On the 15th the emperor came to *Pekin*, and we accompanied the Chinese officers to a temporary building in the lake, where there is a palace, in order to receive his majesty. On the morning of the 20th we attended the emperor, by invi-

* This officer was not a Wún-gyíh or First Minister of State, as will be seen in the list of Wún-gyíhs hereafter given, but the Burmese ambassadors repeatedly given him this title.

† Apparently a plain on which princes encamp or live when they visit *Pekin*.

tation, to the garden situated within the same lake, and his majesty ordered the *Wún-gyih* KOU'N-YE'-THU' to take us round and shew us all the monasteries, temples and gardens. We embarked in a boat with that officer and rowed about the lake, and saw the different monasteries, &c. In two monasteries situated on the top of a hill on the western side of the lake, there were several images of the unequalled and most excellent deity, surrounded by images of inspired disciples. We saw more than fifty priests here also dressed in yellow cloth. There were ten more monasteries on the top and sides of a hill running from the westward of the hill before mentioned to the north. They contained, besides many images of the deity, a figure of the *Mán-Nat* * with 1,000 arms, and figures of hermits and priests in stone, and various paintings. A small hill and the garden where a monastery is situated are joined by an arched brick bridge of 50 *tás*† or 350 cubits. At the end of the lake nearest the city, there is an octagon pyramidical building with three roofs covered with green tiles. On the western sides, on the slope of a hill, there are two Buddhist temples, and a monastery with three roofs; on the south-east a large building with four roofs dedicated to a *Nat;* and on the north-east on a level ground, stands the pyramidical building at which the emperor stops. The lake is upwards of 400 *tás* from north to south, and upwards of 300 *tás* from east to west, and in it there are five large vessels with several boats. The emperor ordered that we should also be taken round and shown all the monasteries within and without the city, and be allowed to compare the books and writings, and see if they were similar to ours.

" On examining the different monasteries, we saw some with images of the deity (GAUDAMA), and priests dressed in yellow in attendance; some with people dressed in dark-colored caps and trowsers, whom the Chinese call *Hó: Shyeng*‡; and some with the ship country Kulás in attendance on the image of *Devadāt*§, which they worship. The books, writings and language spoken in these monasteries were not like ours, and those who accompanied us took notes of all we said, and submitted the same to the emperor.

" On the 23rd October, when the emperor returned from the palace lake to the city, we received him in company with the Chinese officers outside of the western gateway of the palace enclosure. Every day after the emperor

* The Hindu god of love and desire, KA'MA, one of whose names, MA'RA, is written by the Burmese *Már*, and pronounced *Mán*.

† A *tá* is a measure of 7 cubits, and a royal cubit is equal to $19\frac{1}{10}$ English inches.

‡ DU HALDE says, the Bonzes, or priests of *Fo*, are called by the Chinese *Ho-shang*, but the people here described may be of the sect of " *Lookiun*," mentioned by the same author as worshipping demons, and pretending to a knowledge of magic.

§ See in LA LOUBERE's Historical Relation of *Siam* for some account of THEVETAT, whom some Buddhists pretend to consider as the same person as our Saviour.

returned to the city, some of the palace officers wearing red on the top of their head-dress and a peacock's feather, brought to us from his majesty's table different kinds of meat and sweetmeats. On the 28th we joined the Chinese officers in attendance on the emperor, and saw him offer his devotions at a monastery within the palace enclosure. On the 29th we attended the emperor, when he came out from the western gateway of the palace enclosure, and proceeded to the garden in the lake, and on his return, he stopped his sedan chair as he was coming out of the temporary building erected for his accommodation on the royal plain, and giving us presents, said: 'Let the ambassadors return on the 1st of November, in order that my royal friend may learn every thing.' On the same day the Chinese officers of rank summoned us to a spot on the royal plain to the eastward of the palace enclosure, and gave us an entertainment, and delivered to us the emperor of China's letter. On the 31st, the Wún-gyíh Hô-TSOU'N-TENG and KOU'N-YE'-THU', THI'TA'-YI'N, and LU-TA'-YI'N, gave us different presents; and on the same day we went into the palace where the Wún-gyíh Hô-TSOU'N-TENG was, and said to him, 'We were ordered to return on the 1st of November, and to-morrow we are to set out; but we desire to receive an answer to the representation which we made at *Zhehol*.' He replied, 'I have submitted to the emperor every word of your representations, and his orders are:—The men who came to our country are some of them afar off and some of them have disappeared or are dead, and much delay and a long time will elapse in making the necessary inquiries and examinations. When the snowy season arrives, the cold will be very great, and these ambassadors, who have been sent to us on business relating to the country, had better return with all expedition.' The Wún-gyíh also said, 'The six men with NGA TSI'T who were formerly deputed, were taken to the province of *Kuan-toún* in *Tartary*, but they were ordered to be brought back the moment you arrived here, and as soon as they come, they shall be sent down to *Yunan* and forwarded to you;—and with respect to the Tsô-buah of *Bamô*, inquiry shall be made, and he shall hereafter be surrendered. There is nothing difficult now that our two masters have become friends, and the Tsoŭntū of *Yunan* has already received full instructions on every subject.'

"On the 1st November, 1788, after seeing the emperor receive the homage of all his officers, which he does once a year on the last day of a month seated on his throne, we took charge of the emperor's letter, the *Shikyā Muni* image, and various costly presents, and left *Pekin*. We came in a carriage with horses in 23 days' journey from *Pekin* to the city of *Shyeng-yeng:hien* in the district of *Hūpé*, beyond the districts of *Tsūlī* and *Hô-nān*, when we embarked in boats, and came down the stream in 18 days, on the 12th December, to the city of *Tsheng-tait-fū* in the district of *Hūnān*. The route from thence by water being against the stream and very difficult, we proceeded by land in covered sedan chairs, and arrived at the city of *Kue-chow* on the 5th January, 1789. We left that city on

the 6th and arrived at *Yunan* in 16 days, on the 21st January. The Tsoŭntū had marched with a force of 10,000 men to attack the city of *Akyô*, lying to the south-east of *Yunan*, where there there was a war, and THU-YI'N, the governor of *Yunan*, who received us, informed us that in conformity with the application which we had submitted to the emperor, the six men, NGA UH, NGA LHE-GÔ, NGA TSI'T-TÔ, NGA TSI'T-LI', NGA PÔ-BU', and NGA PÔ-YI' subjects of the sun-descended king who were formerly detained and sent to *Tartary*, had been recalled and had arrived at *Pekin* on the 22nd December; that orders had been received to forward them, and that the moment they reached *Yunan*, they should be sent to the golden feet. He also said, 'Our two masters having become friends, the two countries must be like one, and constant intercourse maintained between them;'—and added:—'The new year being close at hand, some difficulty is felt in supplying you with the means of continuing your journey; wait here, therefore, for a short time.' We stopped at *Yunan*, accordingly for four days; and on the 26th of January left it, and in 21 days' journey, on the 15th of February, arrived at *Kaing:mah*. The Tsô:-buah of *Kaing:mah* also said, that he had received letters from the Tsŏuntū of *Yunan* informing him, that the six men who had been sent to *Tartary* were coming with all expedition for the purpose of being forwarded to the golden feet. He also told us, that he had sent letters to *Maing:Teín* and *Theinní* to have the temporary buildings and provisions prepared for us, and requested us to give them a few days to have all in readiness. We waited accordingly at *Kaing:mah* nine days, and on the 24th of February left it, and on the 4th March arrived at *Theinní*."

Memorandum giving an account of the emperor of China and his sons and officers, and a description of the appearance of his palace and of the city of Pekin, (appended to the foregoing report of the Burmese envoys.)

"The age of the emperor is 78 years, of which he has reigned 53 years. The principal of his nine queens is dead. He has five sons and two daughters. The eldest son, LU-YE'H, is 45 years of age. He has six Wún-gyihs, three Tartars, HÔ-TSOU'N-TENG, A-TSOU'N-DENG and THU'-TSOU'N-DENG. and three Chinese, WENG-TSOU'N-DENG, KYI'-TSOU'N-DENG, LHYÔ-TSOU'N-DENG. There are six great officers, one superintendant of war, one treasurer, one superintendant of law and custom, one superintendant of criminal affairs, and one superintendant of learning. There is a general of the nine gates, named KYÓ-MEI'N TI'TU'. A governor of the city, named SHUENG-DENG-THU', and another governor, who is also the chief revenue officer of the city, named PHI'NG-SHENG.

"Thefts, murders or other public offences committed within the city are taken cognizance of by the governors of the city; but those committed in the suburbs and outside of the city, are taken cognizance of by the Tsŏuntū of *Tsit-li* from the city of *Pauk-tin-chow*. The officers and soldiers do not hold districts and villages (in jaghír), but are paid monthly salaries in money according to established rates, and agreeably to their several ranks.

"The emperor of *China* has always worshipped the image of the most excellent deity (GAUDAMA), whom the Chinese call *Shikyā Muni;* and once a year he executes the sentences of criminals in the following manner. The emperor goes to a monastery at which there is an image of the *Tha-gyā Nat*, and the names and acts of the criminals are proclaimed, and written on slips of paper, which are burnt upon a horse and cow, and these animals are then executed. This custom is always followed from a belief, that these papers and the souls of these animals are sent up to the *Tha-gyā Nat.* Within the building covering the *Wumein* gateway of the wall surrounding the palace enclosure, the figures of those men who have gained victories in war, with the number of the victories, are written, and on the outside of that gate there is a monastery in which different emperors have had carved and placed, the figures of men who acquired, renown, and of officers who were faithful or good soldiers; and to this place the emperor goes once a year and does honor. On the northern bank of the lake, to the westward of the palace wall, the figures of the three men, MI'-KOU'N-YE', KUA-TA-YI'N, and TSENG-TA-YÍN, who were killed in the victories obtained in the year 1029 (A. D. 1767), are placed, each under a separate pyramidal building. At the four angles of the palace enclosure wall there is a pyramidal building, in which the armour worn by soldiers, and swords, and spears are lodged. In the buildings at the gateways of the outer city, guns, muskets, shot, and powder are lodged, and constantly guarded by troops. *Pekin* is divided into two cities, the southern and northern* city. In the former there are seven gates, and in the latter nine. The walls are 13 cubits high and 14 cubits thick. At each of the gateways is a building on each side, and a double pair of folding doors. There is a pyramidal building also at each of the four angles of the wall. The ditch surrounding the wall is not lined at the sides, and is about 70 cubits broad, with water let into it. The northern city is about 3500 cubits square, and the southern city about 4200 cubits square. The line of walls inside of the northern city has no battlements, but is covered on the top with yellow-colored tiles†. It is 1750 cubits square, 10 cubits high, and has six gateways at six different points. Inside of this last-mentioned wall is the wall surrounding the palace enclosure; and this is upwards of 700 cubits on the eastern and western sides, and about 1050 cubits on the northern and southern sides. It is surrounded by a ditch filled with water, seventy cubits broad and ten cubits deep, the sides of which are faced with stone. This wall is fourteen cubits high and seven cubits thick; at the four angles there is a tower, and it has a gateway on each of the four sides, and a double-roofed shed supported on ten posts covers each gateway. There are three entrances at each gateway, and the folding gates are covered with plates of iron fastened with nails. The road within the walls of the palace enclosure is fourteen cubits broad and

* The Chinese and Tartar cities. † The external enclosure of the palace.

paved with stone. From a lake situated three *taings** to the north-west of the city of *Pekin*, water is brought into the ditch surrounding the walls of the palace enclosure by a canal, which also conducts it from the ditch into the palace, and thence to the east of the city; and there are stone bridges over this canal. The southern side is the front of the palace. The principal palace is surrounded by another wall, outside of which stands the palace with the throne (hall of audience), which has a square roof fourteen cubits high above the terrace, and the terrace stands six cubits above the ground, and is paved with stone. About one hundred and forty cubits distant from the hall of audience is another large building with a square roof, and on one side of it is the gold treasury, and on the other the silver treasury, with a line of other buildings. To the left of these buildings, and thirty-five cubits distant, are temporary buildings occupied by the officers of the court, and a line of three buildings occupied by scholars or students, literally '*people learning books.*'" (The description of the buildings within the palace enclosure continues for eight or ten lines farther, but in so confused and vague a manner as to render it impossible to be understood by any one but a person who has actually seen the place.)

"When the emperor of *China* takes his seat on the throne, flags, *chowries*, and satin umbrellas are arranged on his right and left hand, and the band of music plays in a large building to the southward. On his right are the military officers, and on his left the civil officers; and they all, at a signal given, bow their heads nine times. The emperor comes out of the palace in the following manner:—He is seated in a sedan chair covered with yellow satin, and preceded by upwards of fifty horsemen, twelve umbrellas of yellow satin, each with three rows of fringe, twelve *chowries* and twelve flags, upwards of twenty spears having the points sheathed, ten led horses with saddles and bridles complete, and upwards of twenty horses with the brothers and sons of the emperor dressed in yellow satin jackets, and armed with bows and swords. Immediately in front of the emperor is carried an umbrella of yellow satin with three rows of fringe, and having the figure of a dragon worked upon it in gold thread, and upwards of an hundred men in charge of the women (eunuchs) surround the emperor's chair. The band of music which plays when the emperor comes out or enters the palace, consists of a pipe with six stops, two trumpets, a fiddle, a lyre, and an alligator harp. The instruments used at Chinese historical plays consist of a small gong, a large gong, a pair of large cymbals, two trumpets, a drum, and a pipe.

"There are fifteen elephants at *Pekin*. The following are the prices of articles in the bazar there. One and half ticals for a basket of rice; 10 ticals for one hundred *viss* of salt; 125 ticals for one hundred *viss* of cleaned cotton; 60 ticals for one hundred *viss* of oil; 1 tical for a basket of *pyaung*, grain (*Madrus Cholum*); 1½ ticals for a basket of

* *Taing*, or when compounded, pronounced *daing*, is a little more than two English miles.

millet. One thousand copper pice pass for $2\frac{1}{2}$ ticals; and these pice are used in sales and purchases. Rice is cultivated and used in the provinces of *Yunan*, *Kŭe-chow*, *Hūnăn* and *Hū-kueng* (*Huguang*). But there are no paddy lands; and *pyaung*, pulse, barley, and millet only are cultivated and used in the provinces of *Hônăn* and *Tsĭtlĭ*, and about the cities of *Zhehol* and *Taing*. As far as *Kŭe-chow* the people of the country wear their hair like the Burmese, all over the head. The people to the north are very numerous, and there are a great many hills, precipices and streams. In *Hu-kueng* people travel in boats, as there are many lakes and streams in that province; and in *Hônăn* and *Tsĭtlĭ* the ground being natural and even, carriages are used. There are no trees, bamboos or ratans, and instead of fire-wood coal is used.

"We heard in *China*, that in the month of May or June in the year 1149 (A. D. 1787) the people of *Taik-wun* having revolted and put to death the governor and officers, the force first sent to subdue them under the general TSHAÍT-TA-YÍN was defeated with great loss. That general was executed by the emperor, and another general THU'-THÍTA-YÍN detached against the rebels, whom he subdued in the month of April 1789, when MI-KOU'N-YE's younger brother, KHUE-KOUN-YE', was appointed governor over the people with the office of Tsé-taik. The two leaders of the *Taik-wun* rebels were decapitated, and their heads, together with the head of the general TSHAI'T TA'-YI'N, were suspended in the market place of the great southern city.

"On the 23rd of August, 1788, about 9 o'clock at night, the *Thí-tshuen* river rose and the water overflowed and drowned the whole city of *Kyĭn-chow* in the province of *Hūkueng*. Upwards of ten thousand people were destroyed, together with the wife and children of the governor, and the second governor himself with all his family. On the receipt of this intelligence at *Pekin*, the Wún-gyĭh A-TSOU'N-TENG was dispatched with upwards of two thousand viss of silver, to provide clothing, food and habitations for such of the inhabitants of *Kyĭn-chow* as remained, which service he performed. Intelligence was also received from the people appointed to guard, that an embryo Bud'dh had appeared at the city of *Thĭ-tsăn* in the *Kulā* country to the westward of *Thĭ-tshuen*, and that the people were disputing and going to war about him. The general AUNG-TSONG-KYÍN was appointed to go and attack them with the force in the city of *Thĭ-tshuen*.

"We saw all the houses and lands destroyed by the floods along the whole road we travelled in the provinces of *Hănăn* and *Hūpé*, from the city of *Kyeng-chow* included. The people also said, that when the walls of the city of *Thĭ-tshuen* fell down and were being rebuilt, a prophetical writing was found, which the nobleman, KHOU'T-MYE'N, who first built the walls, had placed there. The contents of this writing were:—'To the south one thousand *Taings* will be destroyed by water. To the northward, beyond the city of *Shyăn Shĭ*, a stream of blood will flow. A great calamity

will befall the chief and inhabitants of the city of *Kueng-chow*, whilst they are asleep.' People say, that what happened lately corresponds with this prediction.

"The Tsoŭntū of *Kueng-toŭn* reported, that the uncle of the chief of *A'n-năn*, a territory lying to the west of *Kueng-toŭn* and near the *Kueng-thī (Kwang-si)* and *Yunan* provinces, had revolted, and that the chief and his family had fled and arrived at the city of *Kueng-thī*. The chief of *A'nnăn* having regularly sent presents and being a friend, it became necessary to assist him, and attack those who had molested him. The *Kueng-thī* Tītū, YUÍ-TA-YÍN, was appointed general, and a force of ten thousand men, three thousand from *Kueng-thī* and seven thousand men from *Yunan* under the *Yunan* Tītū, was sent against the rebels.

Route of a Journey from the city of Amarapúra to the city of Pekin, travelled by a Mission deputed by the King of Ava to the Emperor of China in the year 1787.—(Literally translated from the Burmese official document.)

Day of the month and year.	Names of Places.	Hills and mountains crossed.	Large Rivers crossed.	Small Rivers crossed.	Bridges crossed.	Chokeys passed.	Distance in Burmese Taings.	No. of nights stopped at each place.	No. of gates in each city.	No. of Lakes.	Under what Jurisdiction.
24th Jan. 1787	Left the city of *Amara-púra*, and stopped at *Phrá-gyíh*, or large *Arra-can* image of Gauda-ma, ...	..	..	..	..	..	1	1	..	..	
25th	Slept in temporary buildings at the city of *Kan-gyíh*, ...	..	..	..	..	..	6	1	..	..	
26th	Slept at the *za-yat*, or public building in the village of *Oún-lhut*,....	..	..	1	..	1	8	1	..	..	Under the city of *Thoún:zay*.
27th	Slept in temporary buildings in the city of *Thoún-zay*, ...	1	..	..	..	..	10	1	..	..	
28th	Slept at *Thek-kay-byen* (plain of coarse grass) and village of *Nán-má*,	2	..	..	..	..	6	1	..	..	Under the city of *Thoún:zay*.
29th	Slept at a halting place in the jungle, on the site of the old village of *Bán-gyí* or *Ban-kyi*, ..	1	..	..	..	..	9	1	..	..	Ditto.
30th	Slept at a halting place in the jungle, on the site of the old village of *Kyaé-goún*, ...	3	..	..	..	..	4	1	..	..	Ditto.
1st July	Slept at a *za-yat* in the village of *Bó-gyó*, ...	2	..	..	..	1	6	1	..	..	Ditto.
2nd	Slept in some buildings constructed for the ambassadors in the city of *Thí-bó*, ...	..	..	..	..	..	3	1	..	..	

Day of the month and year.	Names of Places.	Hills and mountains crossed.	Large Rivers crossed.	Small Rivers crossed.	Bridges crossed.	Chokers passed.	Distance in Burmese Taings.	No. of nights stopped at each place.	No. of gates in each city.	No. of Lakes.	Under what Jurisdiction.
3rd	Slept in the village of *Thi-det*, after crossing the *Móday* river, ...	..	1	1	1	..	7	1	..	..	Under *Thibó*.
4th	To the *té* of the ambassadors (temporary buildings constructed for their accommodation) on the bank of the *Naung-bó* river, ...	..	1	..	..	..	6	1	..	..	Under the city of *Theinní*.
5th	To the ambassadors' *té* in the village of *Láshio*,	1	..	..	..	..	6	1	..	..	Ditto.
6th	To ditto in the city of *Theinní*, ...	1	..	..	..	2	10	9	..	..	
16th	To the ambassadors' *té* in the village of *Teng-gún*,	..	..	1	1	..	4	1	..	..	Ditto.
17th	To ditto in the village of *Maing-puon*, ...	..	..	..	..	..	3	1	..	..	Ditto.
18th	To ditto in the old village of *Na-ti*, ...	1	..	..	..	..	7	1	..	..	Under the city of *Theinní*.
19th	To ditto in the village of *Nán-lain*, ...	3	..	..	..	..	6	1	..	..	Ditto.
20th	To ditto in the village of *Peng-ngo*, ...	2	..	..	..	..	5	2	..	..	Ditto.
22nd	To ditto in the village of *Kuon-loún*, after crossing the *Salu-een* river,	2	1	..	..	..	5	3	..	..	Ditto.
25th	To ditto in the village of *Pan:theng*, ...	..	..	1	1	1	6	1	..	..	Ditto.
26th	To ditto in the village of *Peng-hin*, ...	..	..	..	..	1	4	1	..	..	Ditto.
27th	Crossed the *Nán-phoung* or *Nán-baung* river, the boundary of *Theinní*; (*Nam* is water in the Shan language,)	..	1	..	..	..	2	..	..	..	
Do.	Slept at the ambassadors' *té* at *Peng-ma-khó*, on the bank of the *Nán-Tein* river, ...	..	..	..	..	..	1	1	..	..	Under the city of *Maing:Tein*.
28th	After crossing the *Nán-Tein* river, slept at the ambassadors' *té* in the village of *Tsin-het*, ...	..	1	1	1	1	4	2	..	..	Under the city of *Kaing:mah*.
30th	To the village of *Khoút-lóh*, ...	1	..	1	1	..	3	1	..	..	Ditto.
31st	To the village of *Maing:-Kaing*, ...	2	..	..	..	..	3	1	..	..	Ditto.
1st Aug	Slept at the monastery of *Bóduen-gyíh* (great silver mine,)	2	..	1	1	..	4	2	..	..	Ditto.
3rd	To the village of *Mán-bú* on the little hill of *Luay-wun-bú*, (*Luay*, or rather *Lóai*, is a moun-										

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	tain or hill in the Shan language,).....	2	..	..	..	..	4	1	..	..	Under the city of *Kaing:mah.*
4th	To the city of *Kaing:mah*, a Tso-buah, subject to both *Ava* and *China*, resides here, ...	1	..	1	..	..	1	*m.d.* 5 8	..	..	
12th Jan. 1788	Left the city of *Kaing:máh*, and slept in the ambassadors' *té* in the village of *Wein-yóuk*,..	3	..	2	2	..	4	1	..	..	Ditto.
13th	To the city of *Maing-Tsa*.....	3	..	2	2	..	5	1	..	..	
14th	To the city of *Maing-Yaung*, ...	3	..	1	1	..	8	4	..	..	In the Province of *Yunan* and under the city of *Shuenlí.*
18th	To the village of *Maing:Lá*, ...	3	..	3	3	1	8	1	..	..	Ditto.
19th	To the halting-place of *Toún-dauk-shue*, ...	2	..	..	..	..	7	1	..	..	Ditto.
20th	To a monastery in the city of *Yui-chow* called by the Shan *Meing:Yá*,	1	..	1	1	1	6	3	..	..	Ditto.
23rd	To a monastery in the city of *Shuén-li*, called by Shans *Maing:Chán*. ..	3	..	5	5	5	9	*m.d.* 5 2	3	..	
25th June	From *Maing:Chán* to the village of *Tsi-kay*, or *Tsin-kay*, ...	2	..	2	2	6	6	2	..	..	Under *Maing:Chan.*
27th	To the village of *Nyo-kay*, after crossing the iron bridge over the *Mé-khaung*, or great *Cambodia* river; (Chinese *Lout-san-Kyang*,).....	5	1	3	3	8	10	1	..	..	Ditto.
28th	To the village of *Tshú-kay*.	4	..	..	..	6	10	1	..	..	Ditto.
29th	To the city of *Moún-khuá*,	3	..	1	1	3	6	1	4	..	Ditto.
30th	To the village of *Thán-shyen-bán*, ...	..	..	4	4	5	6	1	..	..	Ditto.
1st July	To the city of *Tá-thí* or *Tá-yí*. (*Tali ?*)	3	..	7	7	7	7	22	4	1	
23rd	Left *Tá-thi* and stopped at the city of *Tsá-chow*,	..	..	5	5	6	6	1	4	1	Under *Ta-thi* or *Tayi.*
24th	To the city of *Yui-nan-ngay* (little) after travelling 2 stages, ...	3	..	15	15	12	12	1	4	1	
25th	After travelling 2 stages to the city of *Kyen-nán-chow*,	10	..	15	15	20	19	1	4	..	Ditto.
26th	To the city of *Tshú-shyoún* (*Tchou-hiung*,)	1	..	15	15	6	6	1	6	..	Ditto.
27th	Dined and relieved bearers &c. at the city of *Kueng-toún-hien*, ...	4	..	10	10	6	6	..	4	..	Ditto.

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27th	Slept at the village of *Shye-tsó*, ...	3	..	5	5	6	6	1	..	..	Under *Ta-thí* or *Tayí*.
28th	Breakfasted and relieved bearers, &c. at the city of *Lú-thoún-hien*,.....	5	1	9	9	7	7	..	4	..	Ditto.
Do.	Slept in the village of *Shyá-kuon-hien*, ...	4	..	6	6	7	7	1	..	..	Ditto.
29th	Relieved bearers, &c. at the city of *An-lín-chow*,	7	..	7	7	8	8	..	4	..	Ditto.
	To the city of *Yuí-nán-gyih* (great) called by the Shans *Maing-Tshi* (*Yunan*,).	1	..	10	10	7	7	2	6	2	
31st	Slept at the village of *Yuí-loún*, after travelling 2 stages (*Yí-loún-tsan* of other lists ?) .	1	..	10	10	17	17	1	..	1	Under *Yunan*.
1st Aug	Relieved bearers, &c. at the city of *Ma-loún-chow*, (*Ma-long*,).....	2	..	10	10	8	8	..	4	..	Ditto.
	Slept at the city of *Tsán-yí-chow*, ...	5	1	10	10	7	7	1	4	..	Ditto.
2nd	Slept in the city of *Phyin-yi-hien* after travelling 2 stages, ...	7	..	10	10	16	16	1	4	..	Ditto.
3rd	Stopped in the village of *Lyó-kuon-toún* after travelling 2 stages, ...	6	..	12	12	13	13	1	..	..	In the province of *Kúe-chow*, (*Koút-cheon.*)
4th	Stopped in the village of *Pé-shyá-tí* after travelling 2 stages, ...	7	..	10	10	12	12	1	..	..	Ditto.
5th	Slept in the city of *Lan-taung* after crossing the *Mauk-tso* river, ...	7	1	7	7	6	13	1	4	..	Ditto.
6th	Stopped at the city of *Tsin-lín-chow*, (*Tchin-ning ?*)	10	..	6	6	10	10	1	4	..	Ditto.
7th	Relieved bearers, &c. at the city of *An-tshúon-fú*, where a Titú resides. (Ngan-chan ?)	7	..	6	6	6	6	..	4	..	Ditto.
	Slept at the city of *An-phyin-hien*, ...	12	..	10	10	8	8	1	4	..	Ditto.
8th	Relieved bearers at the city of *Tshí-tshin*,.....	3	..	4	4	6	6	..	4	..	Ditto.
	Slept at the city of *Kué-chow* where a Fú-yeng resides, (Koei-yang ?)..	3	..	6	6	7	7	1	8	..	
9th	Relieved bearers, &c. at the city of *Loúnli*, ...	5	..	7	7	8	8	..	4	..	Ditto.
	Slept at the city of *Kué-tin-hien*,.....	5	..	8	8	8	8	1	4	..	Ditto.
10th	Slept at the city of *Tshin-phyin-hien*,..... ..	5	..	8	8	16	16	1	4	..	Ditto.
11th	Relieved bearers, &c. at the city of *Tshoún-ngay hien*	3	1	4	4	4	4	..	2	..	Ditto.

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11th	Relieved bearers, &c. again at the city of *Kyueng-phyin-hién (Koang-ping?)*	2	..	4	4	3	3	..	..	..	In the province of *Kúe-chow, (Koút-cheon.)*
	Slept at the village of *Tshì-phyín-hien,*	5	..	7	7	6	6	1	4	..	Ditto.
12th	Stopped at the city of *Tsin-Yueng-fú, (Tchin-yuen.)*	5	..	10	10	6	6	1	8	..	Ditto.
13th	Embarked in boats and dropped down the stream to the city of *Tshí-khyí-hien,* where we supped, ...	mountains passed 10	..	..	1	9	9	..	..	..	Ditto.
	Slept at the chokey village of *Yeng-Phyín,*	5	..	..	..	3	3	1	..	..	Ditto.
14th	Received provisions at the city of *Yui-phyín-hien,*	4	..	..	..	3	3	..	4	..	Ditto.
	Ditto ditto at the city of *Khueng-chow,*	5	..	..	..	8	8	..	4	..	In *Hu-kueng* province (*Houú-quang*) and district of *Hú-nán*, north portion of *Houú-quang* is called *Hou-nan.*
	Slept at the jungle of *Kueng-toún* under Yueng-tsó-fú, ...	7	..	..	..	8	8	1	..	..	Ditto.
15th	Entertained by, and received presents from, the Governor of the city of *Yueng-tsó-fú,*	..	..	..	1	3	3	..	6	..	In *Hu-kueng* province and district of *Hú-nán.*
	Slept at the jungle village of Shyáhó after travelling 2 stages, ...	10	..	..	..	18	18	1	..	..	Ditto.
16th	Received provisions at the city of *Khyeng-yeng-hien (Khyay-ya-hien ?)*	3	..	..	..	4	4	..	3	..	Ditto.
	Slept at the chokey village of *Lín-toún,*	20	..	..	..	16	16	1	..	..	Ditto.
17th	Received provisions at the city of *Shyín-Kyi-hien.*	10	..	..	..	8	8	..	4	..	Ditto.
	Slept at the city of *Lu-kyi-hien,*	10	..	..	..	20	20	1	4	..	Ditto.
18th	Received provisions and presents at the city of *Yuen-tsó-fú (Shyeng-tsó* in other lists *Tching-tcheou,)*	10	..	..	..	6	6	..	4	..	Ditto.
	Travelled that day and all night, and received breakfast at the city of *Tauk-shì-hien.*	3	..	..	..	18	18	1	4	..	Ditto.
19th	Received provisions & presents at the city of *Tsheng taik-fú,* where a Ti-tú resides. (Tchang-te,) ..	3	..	..	..	9	9	..	4	..	Ditto.

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19th Aug	Travelled all night and stopped at the city *Luyeng-hien*, ...	2	..	..	..	6	6	1	3	..	In *Hu-kueng* province and District of *Hú-nán*.
20th	Proceeded and disembarked from the boats at the landing place of *Rí-yeng* or *Yi-yeng*, ...	3	..	..	..	6	6	..	..	..	Ditto.
	Proceeded by land and slept at the city of *Tshíyeng-hien*, ...	..	..	..	..	3	8	1	2	..	Ditto.
21st	Slept at the city of *Niyeng-hien*, ...	..	1	..	..	9	10	1	3	..	Ditto.
22nd	Slept & received presents at the city of *Tshengshyá-fú*, which is the principal city of *Hú-nán*, and at which a *Fu-yeng* resides. (*Tchang-tcha?*)	..	1	..	..	10	10	1	8	..	Ditto.
23rd	Slept in the city of *Shányin-hien*,.....	..	3	7	7	6	12	1	3	3	Ditto.
24th	Slept in the village of *Tákyin-yi*, ...	..	3	4	4	6	12	1	..	..	Ditto.
25th	Slept in the city of *Yó-tsófú*. (*Yo-tcheo?*)	2	4	5	5	6	12	1	4	..	Ditto.
26th	Slept in the village of *Kán-khó*, ...	2	1	10	10	9	18	1	..	..	In the province of *Hu-kueng* (*Houquang*) and district of *Húpé* (north part of *Hou-quang* province, called *Hupè*.)
27th	Relieved bearers at the city of *Bhú-khi-hien*, or *Fú-khi-hien*, ...	..	..	5	5	3	6	..	4	..	Ditto.
	Slept at the city of *Shinlin-hien*,.....	..	4	5	5	6	6	1	4	3	Ditto.
28th	Slept at the village of *Toún-khó*, ...	..	..	5	5	2	14	1	..	3	Ditto.
29th	Embarked in boats and slept in the middle of a lake, ...	..	..	..	..	..	2	1	..	..	Ditto.
30th	Received presents and slept at the city of *Wútsheng-fú*, which is the principal city of *Húpée* and at which a *Tsoútú* lives. (*Foutchang.*)..	..	..	..	..	..	2	1	9	..	Ditto.
31st	Landed and slept at the village of *Shyó-khó*,....	..	..	..	..	..	4	1	..	..	Ditto.
1st Sept	Proceeded by land and stopped at the village of *Yéng-tyeng*, ...	..	..	..	..	7	7	1	..	..	Ditto.
2nd	Stopped at the village of *Kueng-shue*, ...	..	3	5	5	15	15	1	..	..	Ditto.

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3rd Sept	Slept at the city of *Shyeng-yéng-chow*, where we were presented with carriages to ride in, by the *Taouk-tait*, ...	..	1	10	10	13	13	1	4	..	In *Hónán* province *(Hónán)*.
4th	Slept in a monastery in the village of *My'in-kyan yi*, ...	..	1	10	10	8	9	1	..	..	Ditto.
5th	Changed carriages, &c. in the city of *Khyó-shán-hien*, ...	..	..	5	5	8	9	..	3	..	Ditto.
	Slept at the city of *Tshue-phyín-hien*, ...	..	..	5	5	6	7	1	3	..	Ditto.
6th	Changed carriages, &c. at the city of *Shi-phyin-hien*, ...	..	..	4	4	3	3	..	4	..	Ditto.
	Slept at the city of *Yeng-tshan-hien*, ...	..	1	5	5	3	3	1	3	..	Ditto.
7th	Relieved horses, &c. at the city of *Lein-yeng-hien*, ...	..	..	5	5	6	6	..	3	..	Ditto.
	Slept at the city of *Shui-chow*, ...	..	..	5	5	6	6	1	4	..	Ditto.
8th	Relieved horses, &c. at the city of *Tsin-li-hien*, ...	..	..	1	1	10	10	..	3	..	Ditto.
	Slept at the city of *Tsin-chow, (Tching ?)*..... .	..	..	..	..	10	10	1	4	..	Ditto.
9th	Passed the city of *Shín-taik-hien*, ...	..	..	..	..	4	4	..	3	..	Ditto.
	Slept in the village of *Khán-tshuan-yi*, after crossing the *Whengh-ó* river, *(Hoang-ho,)*	..	1	..	..	6	6	1	..	..	Ditto.
10th	Received provisions at the city of *Shyeng-yeng-hien*.	..	..	1	1	6	6	..	3	..	Ditto.
	Received presents and slept at the city of *Wé-khue-fú, (Ouei-kiun ?)* ..	..	..	3	3	6	6	1	6	3	Ditto.
11th	Changed horses, &c. and breakfasted at the city of *Khyi-hien*, which has a mud wall round it,	..	..	3	3	10	5	..	2	..	Ditto.
	Slept at the village of *Ni-kú-yi*, ...	..	..	4	4	12	6	1	..	..	Ditto.
12th	Passed the city of *Tan-yi-hien*, ...	..	..	3	3	4	2	..	3	..	Ditto.
	Received presents, and changed horses, &c. at the city of *Tsán-taik-fú, (Tchang-te,)*	..	..	5	5	10	5	..	8	..	Ditto.
	Slept in the city of *Tshí-chow*, ...	..	..	5	5	14	7	1	4	..	In the province of *Tsit-li, (Tche-li,* or *Pe-tche-lir,)*

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13th Sept	Stopped in the city of *Hó-tan-hien*, ...	..	..	2	2	14	7	1	4	..	In the province of *Tsít-li*, (*Tcheli* or *Pe-tche-li*.)
14th	Breakfasted at the city of *Myéng-kueng-hien*, ...	..	..	1	1	8	4	..	3	..	Ditto.
	Passed the city of *Tshó-ka-hien*, ...	..	..	1	1	8	4	..	4	..	Ditto.
	Received presents and dined at the city of *Shueng-taik-fú*, (*Chun-te ?*)....	..	..	1	1	10	5	..	4	..	Ditto.
	Slept in the city of *Shyeng-taik-hien*,...	..	..	1	1	6	3	1	3	..	Ditto.
15th	Breakfasted at the city of *Ne-khyó-hien*, ...	..	..	2	2	12	6	..	3	..	Ditto.
	Slept in the city of *Pé-shyán-hien*,.....	..	..	3	3	12	6	1	3	..	Ditto.
16th	Changed carriages, &c. at the city of *Tsó-chow*, (*Tcha ?*)	..	..	3	3	12	6	..	4	..	Ditto.
	Slept in the city of *Luéng-yeng-hien*, ...	..	..	1	1	20	10	1	4	..	Ditto.
17th	Received presents at the city of *Tsin-tín-fú*, (*Tching-ting ?*).....	..	1	1	1	12	6	..	4	..	Ditto.
	Slept in the village of *Tshein-tshin-phú*, ...	..	..	1	1	8	4	1	..	..	Ditto.
18th	Changed carriages, &c. at the city of *Tsín-ló-hien*, ..	..	..	2	2	9	4	..	3	..	Ditto.
	Were entertained at the city of *Tsín-chow*, (*Ting?*)	..	..	2	2	6	3	..	4	..	Ditto.
	Slept at the village of *Shin-poún-teng*,.....	..	..	1	1	10	5	1	..	..	Ditto.
19th	Changed carriages, &c. and were entertained at the city of *Wún-tó-hien*, ..	..	..	3	3	6	3	..	4	..	Ditto.
	Dined in the village of *Thuen-yún-khyauk* (*Khyauk* means six in Burmese), ...	..	..	2	2	4	2	..	..	..	Ditto.
	Slept in the city of *Pauk-tín-fú* where a *Tsóun-tú* resides, from whom we received presents, (*Pao-ting*,)	..	..	5	5	14	7	2	8	..	*Aho* called *Tsít-li*.
21st	Breakfasted at the city of *An-shyó-hien*, (*Ngan ?*) (*Ngan-shu* in the lists of other ambassadors.) ..	..	..	2	2	12	6	..	4	..	Under *Tsít-li*.
	Slept in the village of *Péhó*, (*Pé-khó* in other lists.)	..	..	3	3	12	6	1	..	..	Ditto.
22nd	Slept at the city of *Tsó-chow*, ...	..	..	1	1	15	8	1	4	..	Ditto.

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23rd Sept	Passed the city of *Koún-kyi-tsheng*, and stopped at the city of *Lukó-khyauk-ken*, (*Khyauk-ken* may mean 6 chokeys, in Burmese,)	..	..	2	2	12	6	1	4	..	Under *Tsít-li.*
24th	Slept at the village of *Tshí-toun*,	..	..	3	3	..	6	1	..	..	Ditto.
25th	Passed the city of *Khyu-ait-tsó-hien*,	..	..	10	10	12	12	..	3	..	Ditto.
	Slept at the city of *Mi-yuín*.	..	..	1	1	3	3	1	3	..	Ditto.
26th	Breakfasted at the city of *Shi-shyá-hien*,	..	..	7	7	10	6	..	3	..	Ditto.
	Slept near the line of wall of *Hupe-khó* fort, (the fort of *Coupe-keou*,)	3	..	3	3	4	4	1	..	..	Boundary of *Tartary.*
27th	Slept in the village of *Tshán-shi*,	8	..	11	11	9	9	1	..	..	
28th	Ditto at the city of *Lán-phín-hien*,	8	..	12	12	7	7	1	4	..	
29th	Arrived at the city of *Yé-hó*. (*Zhehol* or *Gehol*,)	5	..	1	1	4	4	8	6	..	
7th Oct.	Left the city of *Yé-ho*,	..	..	..	..	..	..	..	..	..	
12th	Arrived at the great city of *Pe-kyín* (*Pekin*),	..	..	..	..	..	..	..	16	..	
			35	493	493	944	1062	109			

No. of Stages travelled, ... 150
No. of Taings, ... 1062
No. of Cities passed, ... 82
No. of Chokeys, ... 944
No. of large rivers, ... 35
No. of small rivers, ... 493
No. of Bridges, ... 493
No. of nights stopped on the road, ... 109

Names of the Ambassadors,

NE-MYO-SHUE-DAUNG, THÍHAGYÔ-GAUNG, WELUTHARA.

On the 7th September, 1790, the Tsô:buáh of *Ba-mó* reported to MENG-DARÁ:GYÍH, king of *Ava*, that several officers of high rank and a Chinese embassy had arrived at *Mó:wún*, with some valuable presents and three Chinese princesses for his majesty. The king ordered the Tsô:buáh to proceed immediately and escort the embassy to *Ba-mó*, and on its arrival there, a special deputation, consisting of a Wún-gyíh and Wún-dauk, with several ladies of rank, was sent with

suitable boats from the capital, to go and bring down the ladies and ambassadors, who, on the 15th October, reached some buildings constructed for their accomodation, outside of the city of *Amarapúra*. Three days after, the Chinese ladies were taken into the palace and received by the king, and placed in some apartments specially constructed for them; and on the 20th October, the Chinese envoys received a grand public audience, at which they delivered the presents sent by the emperor, and were asked by the king the customary two or three questions. At this audience the king placed the Chinese ladies near himself within the elevated stage which forms the throne. The three Chinese ladies, who appear to have been sisters, and are called in the Burmese history *Tá-kú-ngyen*, *E-kú-ngyen*, and *Thán-kú-ngyen*, received honorary titles, and the province of *Taung-baín* was confered on them in *jaghire*. The envoys left *Amarapúra* again for *China* on the 1st November, 1790.

These Chinese ladies are called princesses, and a letter, of which I possess a copy, was written for them in the Burmese language addressed to the emperor of *China*, styling him their grandfather, and expressing great anxiety that he should become a true Buddhist. But they were natives of *Malong*, a town in *Yunan* province, and their feet were in a natural state. There is no doubt that they were women of low rank, and that the whole was an imposition practised upon the king of *Ava's* amorous propensities by the Chinese viceroy of *Yunan*. This was not the only occasion on which that king was imposed upon, for women were also presented to him as daughters of a king of *Ceylon* and a king of *Benares*.

In the year 1792, MENG-DARÁ:GYÍH prepared some valuable presents for the emperor of *China* and the Tsoún-tú of *Yunan*, and conferring an honorary title on each: on the former that of *Thíri tari pawara mahá nága thú-dhamma rájá-dí-rájá**, despatched an embassy to *China* with the presents, and the plates of gold set with rubies on which the titles were engraved. The embassy, consisting of NE-MYÓ-MEN-THA-NÔRA-THÁ, the Tsô:buáh of *Ba-mó*; NE-MYÓ-NANDA-GYÔ-THU', the Ken-wún or superintendant of chokeys; NE-MYÓ-NANDA-GYÔ-DEN, the Padá-wún, royal store-keeper or officer of the king's treasury; THÍ-HA-GYÔ-ZUÁ, the Than-dô-yan and Yáza-nanda, the Tará-na-khan, left *Amarapúra* for *China* on the 23rd of October, 1792. This is the

* The meaning of these *Páli* words is thus given by the Burmese:— "The illustrious and excellent among the three orders of beings, of the great dragon or snake-god race, the king of kings, who practises good works."

embassy, a short account of whose route from *Pekin* was given by the principal envoy, the Tsô:buâh of *Ba-mó*, to Dr. (BUCHANAN) HAMILTON, when he accompanied Captain SYMES to this country, and was published by that gentleman in a paper in No. 5 of the *Edinburgh Philosophical Journal**.

On the 20th August, 1795, a Chinese embassy is again reported in the Burmese Chronicles to have arrived at *Amarapúra* with valuable presents, &c. from the emperor of *China*. Captain SYMES saw this embassy at *Amarapúra*, and he considered it as a provincial deputation only;—but I conceive that none of the members of the Chinese embassies which visit *Ava* ever come from *Pekin*. The letter on gold and some of the presents appear to be sent down to the Viceroy of *Yunan*, and he forwards them by some officers serving under him; and these do not, even on their return, proceed beyond *Yunan*. The Burmese envoys, when they accompany the Chinese, are made to believe that the emperor has conferred some additional rank and employment on the latter, requiring their presence in *Yunan*, and preventing their accompanying the Burmese mission to *Pekin*.

On the 22nd March, 1796, another embassy arrived at *Amarapúra* from *China* with presents and a letter from the emperor, and as I possess a copy of this letter, and as its contents are curious, I annex a translation of it.

"As darkness disappears through the rays of perfumed light, and as light is received when the white rays of day-break appear after the third quarter of the night; so, when reflecting on the affairs of the kingdom and of sentient beings, a good idea occurred (to me). In the beginning of the world the early emperors of *China*, when they attained an advanced age, abandoned the throne to their sons and retired to the wilderness. In the same manner (I) now propose to abdicate in favor of (my) son. Among (my) ancestors the name of the son who was considered most worthy to succeed his father as king, was written and placed on the

* This Tsô:buâh of *Ba-mó* brought, on this or on some subsequent occasion, a large Chinese *chop* or seal from the emperor of *China*, purporting to confer on the king of *Ava* the same power and authority as the emperor himself possessed, over every part of the Chinese empire. This seal is still at *Ava*, and is said to be of pure gold, weighing 3 viss or 10lbs. and of the form of a camel, with some Chinese characters at the bottom. At the time it was brought to *Ava* a question arose as to the propriety of retaining such a gift, as its acceptance might afterwards be construed into an admission, that the king of *Ava* derived his power from the emperor of *China*, or that the latter confirmed the former's title to the throne of *Ava*. The value of the gold, however, of which the seal was made, is said to have decided the Burmese court in favor of keeping it. I can find no notice of this remarkable circumstance in the history of the late king's reign, but the details I have now given were communicated to me by good authority.

canopy (over the throne). When YOU'N-TSI'N (YONG-TCHING), my father, died, the officers, agreeably to the document which he had written and left, raised me to the throne. My grandfather KAN-SHI (CANG-HI) reigned sixty-one years, and my father YOU'N-TSI'N thirteen years. The *Thagyá* and all the other *Nats* having, day and night assisted me, I have reigned sixty-one years, and am now eighty-six years of age; and although my sight and hearing are good, and my physical strength is as complete as ever, I am become an old man. After searching for a proper successor for a period of sixteen years agreeably to the custom of the early kings, I found my eldest son LU-YE', and intended him to be king, but in consequence of his death, my second son, SHI-WU'-YE', will assume the sovereignty with the title of *Kyá'-tín-weng*, on the 1st day of *Tabaung* in the sixty-first year of (my) reign, and at a propitious moment calculated by the astrologers. SHI-WU'-YE' is not an ordinary son; he is a man qualified to conduct all the affairs of the kingdom. (Our) two countries have established a true friendship, to continue to our son's son, and are united like two pieces of gold into one. Consider SHI-WU'-YE' as (your) own younger brother, and as (your) own son, and assist and look (after him)."

MENG-DARÁ;GYÍH sent a suitable reply to the above letter.

I cannot find in the Burmese Chronicles any further notice of Chinese embassies in the reign of the late king, although one or two more must have passed between 1796 and the date of his death in 1819. During the reign of the present king of *Ava* two missions, one in 1823, and the other in 1833, have been sent to *Pekin* viâ *Ba-mó* and *Yunan*. I have procured copies of the routes and of most of the reports submitted to the king by each. Both missions proceeded in company with a Chinese embassy when it returned to *Yunan* from *Ava*, and it will be seen that the route of both, with a very slight deviation, was the same,—in as straight a line as possible from *Yunan* province to *Pekin*.

The chief of the Burmese mission in 1823 was, on its return, appointed governor of *Ba-mó*, which office he still holds. Two or three years ago, at my request, the ministers of *Ava* kindly made the subordinate Burmese envoys draw up an abstract of the report they had sent in, and I now give a translation of it, preceded by the letters from the emperor of *China* and king of *Ava*. The original report, of which I have since procured a copy, is too voluminous for me to attempt to give a translation of it here, and, besides, it does not possess any thing of interest to European readers beyond what this abstract contains.

Letter from the Emperor of China to the king of Ava in the year 1822.

Translation made in the *Lhuot-tó* of the royal letter which was brought by the emperor of *China's* ambassadors, YAN-TA'-LÔ-YE' and YENG-TSHENG-YE', and a copy of which was taken in a (Burmese black) book in the presence of a

party of officers assembled in the conference held on the 10th April 1823, by the interpreters LÔ-SHUE, LÔ-TSHENG, NGA-SHUE-ZEN, and NGA-SHUE-MAUNG, superintended by the Chinese clerk.

"Elder brother THAUK KUON, (TAOU KUANG,) king of *U'dî*, who, assisted by the *Tha-gyá* chief, rules over the great kingdoms and a multitude of umbrella-wearing chiefs to the eastward, affectionately addresses younger brother, the Sun-descended king, lord of the golden palace, lord of the *Tshaddan*, king of elephants, master of many white elephants, and possessor of mines of gold, silver, rubies, noble serpentine and amber, who rules over the great kingdoms and a multitude of chiefs wearing umbrellas, and dwelling in palaces to the westward.

"The royal ancestors of elder and younger brother, assisted by the *Tha-gyá Nat*, have uninterruptedly interchanged letters, and it is now two years since elder brother succeeded to the throne on the departure to the *Nat* country of (his) father. Once in the time of (our) royal ancestors in the year 1111 (A. D. 1749); once in the time of (my) grandfather KHYENG-LOU'N in the year 1140 (A. D. 1787); and once, in the time of (my) father KYA'-TSHI'N in the sixteenth year of (his) reign, and in the time of younger brother's grandfather ALAUNG MENG-DARA'-GYI'H, ambassadors were mutually deputed; and the gold and silver road having been established and the two countries joined in a manner into one, the poor people and (our) slaves have continued to trade together. It is now twelve years since any presents have been exchanged between younger and elder brother's countries. TSHI'N-TA'-YENG, the Tsoún-tú of *Maing:tshi*, was directed to transmit presents again in charge of YENG-TSHENG-YE', but the Tsoún-tú having reported that the presents were not received, because they were unaccompanied by a royal letter, YAN-TA'-LÔ-YE' has also been commissioned to convey the presents; and by the newly appointed Tsoún-tú, MYI'N-TA'-YENG, and Shaya-we of the imperial guard, are sent a royal letter, two fur jackets lined with yellow silk, 1 small *Yenthain* box, and 2 boxes containing glass tea-cups with covers and saucers, for the purpose of being forwarded to younger brother, together with the presents formerly sent, and a male and female *lô** with saddles complete. Let these ambassadors return without delay, and on their return, it will be as if the countenance of younger brother, the Sun-descended king and lord of the golden palace, has been seen."

Direction of the letter.

On the 1st December, 1822, in the second year of T,HAUK KUON's reign, elder brother, T,HAUK KUON, king of *U'dî*, has to represent to younger brother the Sun-descended king.

King of Ava's reply to the above letter.

17th June, 1823. The royal letter on gold leaf to be delivered to the king of *Gan-dá-la-yit*† by TSARE-DÔ-GYI'H (principal clerk or secretary) NE-MYO-MEN:THA, and others, who are appointed envoys to accompany the Chinese ambassadors.

* This is a large description of mule, which the Burmese assert is prolific.

† This is the classical term for *China*. *Taroup* country is the common name.

"The founder of the great golden city of *Yatanápúra, Ava*, lord of the Tsaddan*, king of elephants, master of many white elephants, possessor of mines of gold, silver, rubies, amber and noble serpentine, the bearer of the title *Thiri-pa-wara thú-dhamma mahá rájá-di-rájá*† the sun-descended king, and great king of righteousness, who rules over the kingdoms and a multitude of umbrella-wearing chiefs to the westward, addresses T,HAUK KUON, king of *U'dí*, who rules over the great kingdoms and a multitude of umbrella-wearing chiefs to the eastward.

"It is now thirty-five years since MENG-DARA'-GYI'H, the grandfather of (your) royal friend, and founder of the great golden city of *Amarapúra*, and KHYENG-LOUN, the grandfather of T,HAUK KUON, king of *U'dí*, having formed a sincere and affectionate friendship, the inhabitants of the two countries have been in the enjoyment of a happy and cordial intercourse and trade. In the 4th year of (your) royal friend's reign, and in the 2nd year of T,HAUK KUON, king of *U'dí's* reign, on the 6th of April 1823, YAN-TA'-LÔ-YE', YENG-TSHENG-YE', TSÔ-LÔ-TSOU'N, TOU'N-LÔ-TSOU'N and LA-TSHENG-YE' arrived with a royal letter and various presents, consisting of two fur jackets lined with yellow silk, 1 small *Yen-thain* box, 1 box containing glass tea-cups with covers and saucers, 8 rolls of velvet, 39 rolls of satin, 30 pieces of figured silk, 8 rolls of gold net-work, 190 glass tea-cups, 20 carpets, 15 paper boxes, 20 purses, 10 fans in cases, 100 fans, 1 fur jacket lined with plum-colored silk, a male and female *lô*, 2 Chinese horses, 1 large stone hill (imitation of a hill) with flowering shrubs planted on it, 4 small stone hills with flowering shrubs planted on them, 1 *thauk-zó* tree bearing fruit, and 1 *me-tsó* tree bearing fruit (dwarf fruit-trees). A public audience was granted to these ambassadors on the new year's *kadó*, (beg-pardon levee-day.)

"(Your) royal friend has appointed in return, NE-MYÓ-MEN:THA, who is employed within the palace, NARA-ZE-YA NÔRA-THA', THI'-HA-TSI'-THU' NÔRA-THA', SHUE-DAUNG-THU'-YAN NÔRA-THA, SHUE-DAUNG-THU'-RA NÔRA-THA'-GYÔ-DEN, and YA'ZA NÔRA-THA'-GYÔ-GAUNG, to proceed as (his) ambassadors with the following presents:—

"Three white marble images of the lord GAU-DA-MA, supreme over the three races of beings, *byamhás*, *nats* and men, whom (your) royal friend unceasingly adores in order to obtain *meq* and *phó* (qualities possessed by inspired disciples of GAUDAMA), and Neibban (the Buddhist heaven), and whose images are sent from a desire that he should be worshipped; 2 ivory mats for T,HAUK KUON, king of *U'dí's* own use; 2 ivory boxes; 2 ivory cushions; 2 pieces of yellow broad-cloth; 1 of green and 1 of scarlet; 10 pieces of *Bilat* chintz, 10 pieces of the same with white borders; 10 carpets from the ship country, (country beyond sea;) 4 lacquered-ware boxes, each capable of holding half a basket, 50 lacquered-ware boxes, each capable of holding an eighth of a basket; 3 viss of white sandal-wood, and 3 of red; 100 bundles of gold leaf and 100 of silver leaf; 2

* According to the Burmese there were at one time in this world ten different kinds of elephants, each rising above the other in strength, in a decimal ratio. The lowest in the scale was the present common elephant, and the highest, which was named *Tsaddan* and the king of elephants, was the present white elephant.

† The meaning of this *Páli* title is thus rendered by the Burmese: "The illustrious and excellent, and, through good works, the great king of kings."

ruby rings; 2 sapphire rings; 60 viss weight of noble serpentine; 2 elephants' teeth weighing 42 viss and 82 ticals; 46 uncut rubies, 1 viss weight of *Mobye* stone; 15 peacocks' tail, with 3 male elephants and 2 female. Let these envoys return without delay."

The king of *Ava's* letter, besides not acknowledging the fraternity claimed by the emperor of *China*, and styling him simply "royal friend," has not the respectful particle "*bá*" which is given in the translation of the first part of the emperor's letter.

"Information obtained from THÍ-HA-TSÍ-THU' NÔRA-THA' and YA'ZA NÔRA-THA'-GYÔ-GAUNG, who accompanied the Tsa-re-gyíh NE-MYÓ-MEN:-THA, when he was deputed as envoy to the Chinese city in the kingdom of *Gan-dá-la-yít*, on examining them regarding the affairs and customs of *China*, and the distances of the different halting places on the road.

"In the year 1185, (A. D. 1823,) on the arrival of YAN-TA'-LÔ-YE' and YENG-TSHENG-YE' with more than thirty other Chinese, and with a royal letter and various cloths and presents from the emperor of *China*, who desired to cultivate the same kind of friendship as had existed in the time of his grandfather and father, the king appointed the Tsa-re-gyíh NE-MYÓ-MEN:THA and us as his envoys, to proceed and convey to the residence of the emperor of *China* a royal letter on gold, and various presents in return. We left the great and golden city of *Ya-ta-ná-pú-ra* (*Ava*) on the 18th June, 1823, and in twenty-nine days arrived at the city of *Ba-mô*, on the 17th July. On the road between *Ava* and *Ba-mô*, there are many large cities and villages. On our arrival at *Ba-mô*, the principal Chinese envoys, YAN-TA'-LÔ-YE' and YENG-TSHENG-YE', dispatched a letter in the Chinese language to HU'-TA'-LÔ-YE', the governor of the city *Mó:myín*, informing him of our arrival at *Ba-mô* with a letter on gold, and other things from the Burmese sun-descended king. The governor of *Ba-mô*, also, sent orders by letters to the chiefs of the wild Ka-khyens* residing on the hills and in the wood between the two countries of *Ava* and *China*. We stopped at *Ba-mô* twenty-nine days, until the 14th of August. We left *Ba-mô* on the 15th August, escorted by the Ná-k,hán (Nga-shán), the city writer NGA-BÓH, with two hundred followers, and by four hundred Ka-khyens and their chiefs, making altogether six hundred men. In six stages we reached the village and fortified chokey of *Luay-laing*. On the road between *Ba-mô* and *Luay-laing-ken* there are many cities and villages†. At *Luay-laing-ken* we found the men sent by the governor of *Mó:myín* to receive us, and therefore sent back to their homes the people from *Ba-mô*, and the Ka-khyens and their chiefs, who had come as our escort. We left *Luay-laing-ken* with the men and the horses that had been sent from *Mó:myín* to receive us, and after travelling a

* Wild mountainous race on the frontiers of *China*.

† This sentence must have been interpolated by the Burmese ministers, for the country between *Ba-mô* and this chokey consists of hills and forests inhabited only by the wild Ka-khyens.

distance of ten *taings* reached the city of *Mó:wún*. In the villages lying between *Luay-laing-ken* and *Mó:wún*, there are many pagodas and *za-yats**. In the monasteries to the eastward of the brick-house, in which the Tsô:-bushi of *Mó:wún* resides, there are many *Yahans*†, who have *Then-gans*‡, and other articles of use like the Burmese *Ya-hans*; who adore the three objects§ of worship; observe the five commandments‖, and distinguish the ten greater and the ten lesser sins¶. We stopped at *Mó:wún* two days, and on leaving it reached the city of *Mó:myín* in five stages. A *taing* before reaching that city we met its governor, who was coming to receive us, seated in a sedan chair, and having red umbrellas, and men bearing muskets, swords, lances, and bows and arrows arranged on his right and left. We entered the city of *Mó:myín* with the governor, and were accommodated in a brick-built house with a conference shed, on a space of ground of 30 *tas* or 210 cubits in extent. We remained in this city eleven days, occupied in preparing boxes, in which to pack up the royal presents. The governor furnished the ambassadors with sedan chairs, and our followers with horses, and just as we were about to take our departure, an order from the emperor of *China* was received, which was transmitted by the Tsoún-tú of *Yu-nan*, and stated, that in consequence of the successful services of the principal Chinese envoys who had come to *Ava*, Tsô-LÔ-TSOU'N and TOUN-LÔ-TSOU'N were appointed to a command of 3,000 soldiers each at *Mó:myín*, where they were to remain, and YAN-TA'-LÔ-YE' was appointed to a similar command at *Maing:tshí*, where he was to

* Buildings erected for public accommodation.

† Buddhist priests.

‡ Priest's yellow cloak or garment.

§ Buddhist triad, BUDDH, his precepts, and his disciples.

‖ Not to kill, steal, commit adultery, use intoxicating substances, or utter falsehoods.

¶ The ten greater sins are called *lein*, appearance or characteristic, because the commission of them by a priest involves the forfeiture of his dress and condition. They are,—1st. Taking the life of another. 2nd. Taking the property of another without his permission. 3rd. Having sexual intercourse. 4th. Uttering falsehood with the intention of injuring another. 5th. Using intoxicating substances. 6th. Speaking in depreciation of BUDDH. 7th. Speaking in depreciation of his precepts. 8th. Speaking in depreciation of his disciples. 9th. Entertaining heretical doctrines. 10th. Having carnal connexion with female *Ya-hans*.

The ten lesser sins are called *dán*, penalty or punishment, because the commission of them subjects the priest to certain penalties, such as having to bring a certain number of baskets of sand or pots of water to the monastery. They are,—1st. Eating food after the sun has passed the meridian. 2nd. Hearing or seeing music, singing or dancing. 3rd. Ornamenting the person and using perfumes. 4th. Sitting on a higher or more honorable place than your religious teacher. 5th. Touching with pleasure gold and silver. 6th. Striving from covetousness to prevent other priests receiving charitable donations. 7th. Striving to render other priests discontented so as to prevent their remaining in the monastery. 8th. Striving to prevent other priests acquiring wisdom and virtue. 9th. Reviling and censuring other priests. 10th. Backbiting and exciting schisms and separation among priests.

remain. With WU'N-TA'-LÔ-YE', whom the governor HU'-TA'-LÔ-YE' appointed to take charge of us, and the Chinese interpreters YENG-TSHENG-YE', LA-TSHENG-YE', and YA-TSHENG-YE' we left *Mó:myin*, and in four stages reached the river called by the Chinese *Loŭn-kyan* and by the Burmese *Mê-khaung*. To cross this river there are two iron chains, each consisting of three chains twisted together and measuring about ten fingers in diameter and 245 cubits long with hooks at the ends. These being drawn over the stream, which is 140 cubits broad, and fixed to two posts on each bank, a plank flooring is laid upon them, at the sides of which flooring posts are let in, and the whole is covered by a roof. This bridge is called an iron bridge and is 7 cubits broad. Thence in seventeen stages we reached the city of *Maing:tshì*. Here on a piece of ground 175 cubits in extent, paved with bricks, a religious edifice is erected, in which is placed a gilded wooden image of GAUDAMA sitting cross-legged on his throne. We were lodged in some brick-built houses to the south and north of this religious edifice. The Tsoŭn-tū lives in a brick house of 70 cubits in extent. We remained here twenty days, and left it on the 21st October, 1823, the Tsoŭn-tū of *Maing:tshì* having given to us, the five ambassadors, sedan chairs with glasses at the sides, and horses to our followers, with bearers and attendants for the whole of our party. In twenty-four stages we reached the city of *Tsein-shuon-fū* where we stopped a day to prepare the boat in which we were to embark. There were ten boats for the Chinese and ten boats for us; and having obtained the requisite number of boatmen and porters, we moved down the stream, and in fifteen days reached the city of *Tshan-taik-fū*, where there are many ships (junks) and boats. Between *Tshan-taik-fū*, and *Tsein-shuon-fū* there are many large towns and villages. We stopped a day at *Tshan-taik-fū*, and then proceeded by land in thirty-seven stages to the *Tseng-tein-fū*. This city is one *taing* square, and in the middle of it there are four pagodas 40 or 50 cubits high, built in shape like the base of a *Phoŭn-gyih's* or Buddhist priest's flag staff, and a large *kyaung* or monastery with five roofs of green and red color, and with a winding staircase. In the centre of this monastery there is a gilded image of a *nat* 25 cubits high, standing upright and having *lotus* leaves on its head, and within a hole made between the eye-brows of this *nat*, we saw an image of GAU-DA-MA sitting cross-legged and about eight fingers breadth in height. Between *Tshan-taik-fū* and *Tseng-tein-fū* there are many large towns and villages. After leaving *Tseng-tein-fū* we arrived in ten stages, on the 22nd January, 1824, at the city of *Pêkyīn (Pekin)* the residence of the king of *China*. We left *Ba-mô* on the 15th August, 1823, and arrived at the Chinese capital on the 22nd January, 1824, being one hundred and sixty-one days, or five (Burmese) months and twelve days.

"On arriving at *Pekin* we were lodged at the brick-house, where it is customary for all ambassadors to be accommodated, about 2,100 cubits distant from the walls of the inner town, to the north-west of the palace

within the large town. We think the walls of the outer* town are about 20 cubits high and 14 thick, and those of the inner town 18 cubits high and 10½ thick—and the former are complete in parapets and platforms. The walls of the large outer town are entirely of brick, and the top of the walls of the inner town is covered with sheets of copper, on which there is a coat of yellow paint. On the southern side of the large town there is a large *hog's head*† of brick work, extending from the south-east angle to the north-east, and we entered by the *Khăn-shyi-mhein* gateway of this *hog's head*, and by the centre gateway of the great town called *Tsheng-mhein*. We first went to the house of the Wún-gyíh Lí-PU'-TA'-YENG, situated within the large town, and were requested by him to deliver the royal letter; and on our doing so, he bowed his head down respectfully and came forward to receive it. There is no Lhuot or Yoŭn (minister's council house or court house, in which it is customary for ambassadors in *Ava* to deliver their letters). We were lodged in a brick-house with a conference shed within the large town, and to the north-west of the palace enclosure walls.

"The outer large town may be about 14,000 cubits from north to south, and about 6,300 cubits from east to west. The inner town may be about 4,200 cubits from north to south, and about 3,500 cubits from east to west. There are twenty gates, and their names are—to the southward, in the *hog's head*, there is the Toŭn-byăn-mhein gateway; then, going to the westward, the Shyă-hū-mhein, Shyă-kō-mhein, Yoŭn:-tshein-mhein, Năn-shyín-mhein, Khăn-shyi-mhein, and lastly to the south-west, the Shyín-byăn-mhein, altogether seven gateways. On the eastern face of the great city, there are to the eastward, the Toŭn-tshein-mhein gateway, and to its southward the Tshí-wă-mhein. On the southern face to the south-east, the Tshū-wein-mhein; then, in the centre the Tsheng-mhein, and to the south-west, Shyŭn-tsí-mhein. On the western face, to the south-west, the Phyeng-tsō-mhein, and to the northward of it the Shyeng-tsí-mhein. On the northern face, to the west, the Tō-shyăn-mhein, and the east, An-t,hein-mhein, making sixteen gateways altogether in the large town. In the inner town there is to the eastward To-wha-mhein, to the southward T,ha-tseng-mhein, to the westward Shyín-wă-mhein, and to the northward Hō-mhein gate, making four gateways in the inner town, and twenty altogether in the two towns.

"The second and inner wall around the residence of the emperor of *China* is surrounded by a moat with water and has towers and fortifications. Its extent from north to south is 1,400 cubits, and from east to west about 2,300 cubits, and it is 20 cubits high and 14 thick. The front of

* This appears to be "the *Tartar* city," and by the "inner town" I conceive the *external* enclosure of the palace is meant.

† This is the usual term for the bastion of a fort, but here it appears to be applied to the whole of that portion of *Pekin* called "the Chinese city."

the palace faces to the southward. In regard to the construction of the palace, on a terrace of bricks 5 cubits high, 210 cubits long, and 140 broad, covered with plaster, posts are let in, surrounded by stones at bottom, and on them transverse beams and rafters are placed, and a double roof without a spire, covered with yellow Chinese tiles. The sides of the palace are of plank painted with blue and red color. The planks are not of teak-wood but of fir. The centre gateway on the southern sides of the palace enclosure wall is arched, and is that used by the emperor of *China*, and on each side of this gateway there are two smaller entrances used by the ministers and officers. The centre gateway on the northern face also is arched, and has smaller entrances on each side. The western and eastern faces have the same kind of gateway and entrances.

" Whilst residing in the brick-house the five principal men of the Burmese Mission were daily supplied at night and in the morning with rice, salt, fish, *ngā-pi*, chillies, onions, greens, pork and fowls under the direction of the Chinese officer PAN-TSHAING and his servants, Teng-tsani, who watched us day and night. The thirty-two inferior people (of the mission) also were daily supplied with rice and curries ready dressed.

" At 3 o'clock of the morning of the day of our arrival, five carriages with *ló* horses were sent to us, and we were summoned by the Lí-pú-tá-yeng Wúng-gyíh to attend on the emperor, who was coming out to see the amusement on the ice. We proceeded accordingly, and joined Lí-pú-tá-yeng on the outside of the gateway, on the northern face of the palace enclosure wall. We got out of our carriage and waited with the Wún-gyíh outside of the gateway for the appearance of the emperor. About twenty-two minutes after we arrived, the sound of large gongs, bells and trumpets announced the approach of the emperor, and shortly after he made his appearance. Outside of the gateway there were two rows of twenty men in each, waiting with large fans in their hands, and when the emperor came out of the gate, these men stooped down and formed an arch with their fans, but when the emperor had passed through this arch, they did not follow him, but remained where they were.—With respect to the ceremonial on this occasion of the emperor's appearing abroad—in front of his party there were four umbrellas of red, blue, green and black colours, two on each side, on the right and left of the road ; behind them there were two rows of horsemen, twenty in each, armed with swords—behind them, came two rows, six men in each, of officers of rank, who had obtained two or three peacock's feathers, armed with swords and dressed in the fashion of the country. Behind them came two rows more, six in each, of officers of rank, who had obtained two or three peacock's feathers, armed with bows and arrows. Seven cubits in front of the emperor and in the middle of the road, a yellow umbrella was carried, and the emperor followed, seated in a yellow sedan chair borne by eight men. Behind him there were officers of rank armed with swords and bows and arrows, and arranged in the same manner as those who preceded him. After the

emperor's party, his relatives, some in sedan chairs, some on horseback, and some in carriages followed;—and after them came the ministers and officers, and a party of men in charge of the ladies of the palace (eunuchs). On arriving at a lake situated more than 1050 cubits to the north-west of the palace enclosure wall, on which the ice amusement was to take place, and near which there was a garden with a small rocky hill, the emperor's sedan chair was set down at the side of the garden. In the lake measuring about 700 cubits in extent, the top of the water consisted of hard solid ice upwards of three cubits thick, and on this ice a target with a pole 15 cubits high was fixed. A hundred soldiers armed with bows and arrows, and having plates of iron fixed with nails on their shoes, stood with their feet close together and shot with arrows at the target. Some hit the target and some not; but after discharging their arrows, they moved forward, not as in walking, but with both feet close together, suddenly to a distance of 140 or 210 cubits, and turned round and went away. The emperor did not get out of his sedan chair, but had it placed on the lake upon the ice, whence he looked on at the amusement. We stood about 42 cubits distant from the emperor with the Toi-tshuon (Si-chuen?) Mahomedan ambassadors, but in front of them, having our shoes on, and the official cap, dress and ear-rings which his majesty had bestowed upon us. The emperor, we saw, was dressed in yellow-coloured pantaloons and a fur jacket, and he returned to the palace from the ice amusement at 7 o'clock, in the same order as before, and we also returned to the ambassadors' house.

"On the 26th January we sent the royal presents under charge of YA'ZA NÔRA-THA'-GYÔ-GAUNG, and on the 30th we had an audience of the emperor in the front of the palace, in the *Thaik-hô-teng** apartment. We were asked if the Sun-descended king, the queen, royal family and ministers were well and happy, and respectfully answered, that through the grace of the three objects of worship, they were well and happy. We were treated in the palace with sweetmeats and fruit, and then returned home. On the 31st of the same month we again went to the palace on the occasion of the emperor going out to a temple. On the 1st February we were again admitted into the palace, and had an audience; and again on the 6th and 7th February; and again on the 11th, when the emperor was going out to the *Tsí-kuon-kô* garden, situated about 700 cubits to the west of the palace. A roll of red, blue, and yellow silk was given to each of the five principal men of the mission, and we were treated with cakes and sweet and sour fruit. On the 12th February we were again admitted, when the emperor was going out to see fire-works of white and yellow colours, resembling flowers and flags, let off in the *Yue-mi-yeng*† garden to the north-west of the palace. On the 12th a carriage with *lô* horses was

* DU HALDE's *Tai-ho-tien*, or hall of the Grand Union.

† Sir G. STAUNTON's gardens and pleasure grounds of "*Yuen-min-yuen*."

sent, and we were invited by LÍ-PU'-TA-YENG to accompany the emperor, when he was going out, and we went accordingly. We were accommodated in a brick-house about 3500 cubits distant from the palace in the *Yuh-mi-yeng* garden. On the night of the 14th February we attended the emperor in the *Yue-mi-yeng* garden, and saw the fire-works, and were treated with sweetmeats and eatables and drinkables. On the 15th February we went again, and were again treated with refreshments, and on the night of the same day we went again, when fire-works were let off. On the 19th February LI'-PU'-TA-YENG having sent word to us to request leave to return, when we went before the emperor we submitted our request. The emperor ordered, that suitable royal presents and gifts for the ambassadors should be prepared and delivered, and the envoys allowed to return; and on the 20th we returned to our former residence within the large city. The emperor of *China* proceeded from his palace in *Pekin* to his palace in the city of *Yehô* (*Zhehol*) in *Tartary* on the 24th February. On the 25th we went by desire of LI'-PU'-TA'-YENG to receive and take away the royal presents, and on entering the palace the royal presents and cloths were packed in boxes and delivered to us, under the direction of LI'-PU'-TA'YENG, and we received and took them away. Ten roll of fine silk were given to each of us five principal men of the mission, and to the subordinate persons five pieces of silk and five pieces of blue cotton cloth. On the 27th February we went to LI'-PU'-TA'-YENG's house to take leave. LI'-PU'-TA'-YENG having furnished us with five carriages and men, we took our departure on the 29th February, 1824.

"Whenever the emperor came out of the palace or went to the *Yue-mi-yeng* garden he was attended by two rows, two in each, of persons who had obtained two or three peacock's feathers, or who wore red on the tops of their caps. They used fur cushions or carpets spread on the floor.

"For the use of the emperor in the hot season, the ice on the lake to the north-west of his palace enclosure is broken open, as we saw, with hatchet and axes, &c., and pieces about three or four cubits thick and two or three long, have a hole made at one end as is done by us to logs of timber and are conveyed by ropes and put into the moat surrounding the palace enclosure. This ice melts and becomes water in consequence of the heat in the increasing moon of *Ta-baung*, (March.)

"The emperor appoints seven different Tsoŭn-tus. The westward two, to the southward three, and to the eastward two. There is no Tsoŭn-tū appointed to the northward, where the kingdom joins to *Tartary*. There are thirteen officers who exercise authority under one of the western Tsoŭn-tūs. The names of those who receive orders from the Títū, who commands the soldiers under the *Tsoŭn-tū*, are *Tí-taik*, *Kheng-taik*, *Shyín-taik*, *Taŭk-taik*, *Tshăn-kyan*, *Yō-kyge*, *Tū-tseng*, *Shyō-pe*, *Tsheng-tsoŭn*, *Pé-tsoŭn*, *Wū-tsoŭn*, and *Lô-tsoŭn*, making altogether thirteen military officers. There are ten civil officers under the Tsoŭn-tū, and their names are PHU'-TAIK who exercises authority over the revenue officers, sitting

on the left hand of the Tsoŭn-tū and on an equality with him; and under PHU'-TAIK and receiving orders from him, are, PHU'-KHUENG, TSÓ-KHUENG, YENG-TSE, YENG-TAUNG, PAN-TSHAING, TA'-KAUK-KOU'N; SHYAUK-KAUK-KOU'N, TU'TÓ, and TENG-TSANÍ, making ten great and small civil officers*. The Tsoŭn-tū has authority over and issues orders equally to both classes of officers. In the same manner as we have above described, the other six Tsoŭn-tūs exercise authority over the military and revenue officers. With each Tsoŭn-tū under the Tí-tú there are seven military officers, and under each military officer there are 3,000 musqueteers, making 21,000 under the seven officers. Under the seven Tsoŭn-tūs, there are seven Tí-túş, 49 military officers and 147,000 soldiers. When the soldiers are to receive their monthly pay, orders are given to the Phū-taik, who brings the money to the Tsoŭn-tū, and he delivers it to the chief of the soldiers, to the Tí-tú, who distributes it amongst the soldiers, at the rate of three ticals of Chinese silver a man per month. There are eight officers near the person of the emperor, receiving and executing his orders. The Wún-gyíh (minister) LI-PU'-TA'-YENG, LI'-PU'-TA'-YENG, KOUN-PU'-TA'-YENG, HU'-PU'-TA'-YENG, PYENG-PU'-TA'-YENG, SHYENG-PU'-TA'-YENG, NUE-PU'-TA'-YENG, and KYÓM-HEIN TÍ-TU'. LI-PU'-TA-YENG has a general control over the affairs of the empire. LI'-PU'-TA'-YENG has authority over ambassadors and persons who have come from a distance. KOUN-PU'-TA'-YENG has authority over all that relates to learned men and artificers. HU'-PU'-TA'-YENG has authority over the revenue, cultivation of lands, and lists of the population taken once in three years. PYENG-PU'-TA'-YENG has authority over carriages, horses, and boats used for conveyance to different places, and he grants orders with his seal whenever they are required†. SHYENG-PU'-TA'-YENG exercises authority over thieves, robbers, and all whose crimes are deserving of punishment. NUE-PU'-TA'-YENG has charge of the palace, and all that relates to it. KYÓ-MHEIN TÍ-TU' has charge of the different gates of *Pekin*.

"On the jackets worn by the military officers, on the breast and back, there is the figure of a tiger; and on the jackets worn by the civil officers, on the breast and back, there is the figure of a bird. On the breast and back of the jackets worn by the 147,000 *Lô-tseng*, (Chinese word for musqueteers ?) there is an inscription in the Chinese character. The civil and military officers, according to their several talents, receive as a mark of distinction, one, two or three peacock's tails. There are not more than three peacock's tails; but the mark of distinction above that number, is to have the top of the head-dress colored red. The royal family wear on the top of their head-dress three rows of rubies. When a Chinese Tsoŭn-tū travels, there are five men on each side of the road in front of him, carrying iron chains and howling like dogs‡. The officers

* The names of these civil and military officers vary much from those given in Appendix 3 and 4 of Sir G. STAUNTON's account of Lord MACARTNEY's embassy.

† According to DU HALDE this officer has also the care of the troops.

‡ See DU HALDE's Chapter on the Chinese form of Government.

under the Tsoŭn-tū are accompanied by six, four, or two men, according to the respective rank of such officers. Whenever all these officers, including the Tsoŭn-tūs, go abroad, a salute of three guns is fired, and at every military post, of which there is one at every two miles on the road, a salute of three guns is fired, when these officers arrive at those military posts. The Tsoŭn-tū, Tí-tú, Tí-taik, Kheng-taik, Shyín-taik, Tauk-taik with the civil officers Phū-taik, Phū-khueng, Tsō-khueng and Yeng-tse, every night at 9 o'clock shut their doors, fire three guns, and go to sleep. At dawn in the morning the doors of their houses are opened, and a salute of three guns is fired. The Tsoŭn-tū, Tí-tú, Phū-taik and all the other military and civil officers perform the public service on monthly wages, paid agreeably to their respective ranks. In order that the money of the poor may not be diminished, those who deserve flogging are flogged, and those who deserve imprisonment are imprisoned, (meaning that there are no fines.)

"In the empire of *China* there are no leaf palm, palmyra, mango, jack, betelnut, plantain, tamarind, lime, guava, or custard-apple trees. The trees which grow before you reach *Pekin*, in the neighbourhood of *Mō:myín*, *Yu-nan* and *Kue-chow*, are walnuts, chestnuts, pears, firs, wild palmyras, wild plantain trees, pumplemoos and oranges. In the city of *Pekin* there are not any large trees or bamboos, or fire-wood for cooking, as there are at *Ava*; there are fir trees only. Food is cooked with coal, and there is a separate hill from which the coal is brought.

"Between *Ba-mô* and the city of *Pekin* there are 120 stages, and a distance of 6,944,000 cubits. We halted in 59 cities and 59 villages, and twice in the jungle, making altogether 120 stages. We left *Ava* for *China* on the 18th June, 1823, and returned to *Ava* on the 14th March, 1825."

Route of a journey from the city of Ava to the city of Pekin, travelled by a Mission deputed by the King of Ava to the Emperor of China in the year 1823.—(Literally translated from the Burmese official document.)

Date.	Names of places.	Taings*.	Remarks.
18th June, 1823.	Left the city of *Ava*, and proceeded to the city of *Ama-ra-pú-ra*, where the mission stopped a day to complete the equipment of their boats,	3	* The estimated distances are given in the Burmese *taing*, equal to 2 miles 293⅓ yds.; in round terms, two miles or one coss.
20th.	Villages of *Men-guon* and *Shya-yaung*, ...	4	
21st.	Village of *Ngú-bat-khyaung* (river),	10	
22nd.	Villages of *Yoún-pen* and *Ka-pyut*,..	10	
23rd.	Chokey of *Tsám-bay-na-gó*, where the mission stopped two days, as there was no wind, and the boatmen were changed,.....	8	
26th.	City of *Kyán-nhyat*, ...	9	
27th.	City of *Ta-gaung*, ...	10	

Date.	Names of places.	Taings.	Remarks.
28th June, ..	Village of *Thí-gyain*, opposite to the town of *Mya-daung*, ...	9	
29th.	Village of *En*, under *Mya-daung*, ..	8	
30th.	Village of *Ye-bout* under city of *Katha*,.....	8	
1st July, ..	Village of *Kyauk-thoun*, under the city of *Yen-gé* or *Yeng-khé*, ...	7	
2nd.	Village of *Nga-lú-doun*, under ditto,	6	
3rd.	Village of *Zí:byú-goun*, under *Shue-gú*, ...	4	
4th.	Village of *Shue-boún-thá*, under ditto,	2	
5th.	City of *Shue-gú*. Here, in consequence of the stream running with unusual violence over the rocks, the mission durst not advance, and waited nine days, ...	2	
14th.	Village of *Nyaung-ben-thá*, under *Tsín-khan*,.....	4	
15th.	City of *Tsín-khan*, ...	2	
16th.	Village of *Len-ban-gya*, opposite to *Kaung-toún*, ...	4	
17th.	City of *Ba-mó*, where the mission stopped 28 days, for answers to petitions sent to the king at *Ava*,..	2	The Shan names are *Kat-mái* and *Man-má*, and the Chinese *Tsín-kai*.—B.
	Travelled in 19 days, ...	112	Burmese *Taings*.
15th Augt.	Left *Ba-mó*, and halted at the village of *Tsí-en* or *Tsín-eng*, ...	4	
16th.	*Ta-dá-gyíh*, (great bridge,)	6	The Shan name is *Khó-lóng*, meaning also great bridge or causeway.—B.
17th.	On the *Ka-khyen* hill village of *Mhaing:toún*,.....	6	
18th.	On the *Ka-khyen* hill village of *Hótoún*, ...	6	The Shan name is *Hó-tóng*, meaning end of the paddy fields.—B.
19th.	On the *Ka-khyen* hill village of *Mhaing:khá*, ...	4	The Shan name is *Mung-khá*.—B.
20th.	At the *Luay-laing Ken-dat*, or fortified chokey of *Luay-laing*, ...	4	Frontier post between *Ava* and *China*, which has a Chinese garrison of 100 *Ló-tseng*, (Chinese word *Lô-chiong* for soldiers.) The Shan name is *Loai-leng*, red hill.—B.
	Travelled in six days, ...	30	Burmese *Taings*.
21st.	City of *Mó-wún*. Here the mission stopped two days, in consequence of being fatigued, ...	9	The Shan name is *Máng-wan*, and Chinese name *Long-tchuen*.—B.
24th.	*Shyan-mue-loun*, *Ken-dat*, or fortified chokey of that name,.....	8	Here is a Chinese garrison of 1,000 *Ló-tseng*.
25th.	Village of *Moún-toún*,.....	8	Shan name *Montong*.—B.

Date.	Names of places.	Taings.	Remarks.
26th Augt...	City of *Main-thí* or *Main-dí*, where the mission stopped a day,.....	7	Shan name of *Múng-Tí*, and Chinese name *Nan-ten*.
28th.	City of *Mó:myín*, where the mission stopped 12 days, in consequence of the elephants intended as a present from the king of *Ava* to the emperor of China not having come up, and in order to give them a little rest after they joined, ...	10	Shan name *Múng Myeng*, and Chinese name *Theng-ye-chow*.
8th Sept. ..	Village of *Kan-lan-tsan*, ...	8	Shan name *Kap-nám-chán*, meaning *Chan* river bazar.—B.
9th.	Village of *Pá-weng*, ...	8	Shan name *Páwan*, under *Múng-khú-lóng*, near it.--B.
10th.	Village of *Phu-pyauk*, after crossing the *Sa-lueen* river, ...	7	Shan name *Phu-phyao*.—B.
11th.	City of *Wung-tsheng* or *Wunzen*, where the mission stopped a day to receive some presents, ...	9	Shan name *Yóng-sang*, and Chinese *Yung-tchang-fú*.—B.
13th.	Village of *Shyan-mu-hó*,.....	12	
14th.	Village of *Yan-pyen-hien*, ...	9	Called *Youn-byen-hien* in another journal.—B.
15th.	Village of *Shyan-leng-po*, ...	9	Called *Khuon-leng-bú* in another journal.—B.
16th.	*Yán-byí-hien*,.....	11	
17th.	Village of *Hó-kyan-po*, ...	6	
18th.	City of *Tsauk-chow*, under *Táli*, ...	9	
19th.	Village of *Khoun-haik*, ...	8	Between these two places one day and stage are omitted in two different copies of the Envoy's journal I have procured. In the journal of a subsequent mission, *Yit-nan-yi* is set down between these two stages.—B.
21st.	Village of *Pú-poún*,.....	6	
22nd.	Village of *Shya-khyauk*, ...	6	
23rd.	Village of *Lí-hó*,.....	6	
24th.	City of *Tshú-shyoun* (*Tchou-hiung*),..	6	
25th.	City of *Kueng-toun-hien*, ...	7	
26th.	Village of *Shay-tse*,.....	6	
27th.	City of *Lú-thoun-hien*, ...	8	
28th.	Village of *Ló-ya-kuon*, ...	6	
29th.	City of *An-leng-chow*,..... ..	8	
30th.	City of *Yit-nan*, *Maing:Tshí*, the residence of the *Tsoun-tú*, where the mission stopped 20 days waiting for the elephants to come up, ...	6	
	Travelled in 26 days, ...	203	Burmese *Taings*.
21st Oct. ..	Left *Yit-nan*, and stopped at the village of *Wan-khyauk*.....	5	
22nd.	Village of *Yan-lein*,.....	7	
23rd.	Village of *Yí-loún-tsan*, ...	9	
24th.	City of *Má-loún-chow* (*Malong*),....	7	"This is the city of the three Queens," 3 Chinese ladies sent to the late king of *Ava*, MEN:DARA'GYI'H, and called princesses.
25th.	City of *Shyá-yí-chow*,.....	5	
26th.	Village of *Pé-shue*,.....	7	
27th.	Village of *Pyeng-yeng-hien*, ...	6	
28th.	Village of *Yi-za-khoún*, ...	7	
29th.	Village of *Yo-kuon-teng-tsán*, ...	7	
30th.	Village of *Pé-shyan*, ...	11	
31st.	Village of *A'-tú-teng*,.....	6	
1st Nov. ..	City of *La-taing*,.....	6	
2nd.	Village of *Bó-koun*,.....	6	
3rd.	City of *Tsein-leng-chow*, (*Tchin-ning?*)	6	

Date.	Names of places.	Taings.	Remarks.
4th. Nov. ..	City of *An-shue-fú, (Ngan-chan ?)* ..	6	
5th.	Village of *Ngan-pyeng-hien*, ...	8	
6th.	City of *Tsheng-tsein-hien*, ...	6	
7th.	City of *Kue-chow*, (*Koei-yang ?*) Here the mission stopped a day to receive some presents, ...	6	
9th.	*Loún-li-hien*, ...	6	
10th.	Village of *Kue-tein-hien*, ...	7	
11th.	Village of *Lyó-yan-tsan*, ...	6	
12th.	Village of *Sheng-pyeng-hien*, ...	8	
13th.	City of *Khan-pyeng-chow*, (*Koang-ping ?*)	7	
14th.	Village of *Tsi-pyeng-hien*, ...	7	
15th.	City of *Tsein-shuon-fu*, (*Tchin-yuen,*) where the mission stopped a day to prepare and embark in boats, ...	7	
	Travelled in 25 days, ...	169	Burmese *Taings*.
17th.	Left *Tsein-shuon-fú* by water and proceeded down the stream to *Tshí-tshein-hien*, ...	9	
18th.	Village of *Tá-yi-than*, ...	13	
19th.	Village of *Pyan-shue*, ...	10	
20th.	City of *Yuón-tsó-fu*, ...	10	
21st.	Village of *Tsoún-than*, ...	12	
22nd.	City of *Hoún-kyó-chow*, ...	11	
23rd.	City of *Ngan-kyaung-chow*, ...	6	
24th.	Village of *Toún-wún-ló*, ...	8	
25th.	Village of *Shi-wú-shithó*, ...	13	
26th.	Village of *Má-tsein-ngó*, ...	6	
27th.	City of *Shyeng-tsó-fú*, (*Tching-tcheong,*)	8	
28th.	Village of *Kyay-tan*, ...	11	
29th.	Village of *Kaing-shyó*, ...	10	
30th.	Village of *Tauk-shyú-hien*, ...	12	
1st Dec. ..	City of *Tshan-taik-fú*, (*Tchang-te,*) where the mission disembarked from the boats, and stopped a day, ...	9	
	Travelled in 15 days, ...	148	Burmese *Taings*.
3rd.	Left *Tshan-taik-fú*, by land in litters or sedan chairs, and halted at *Tá-loún-tsan*, ...	6	
4th.	Village of *Tsi-khuá-yi*, ...	6	
5th.	City of *Li-chow*, ...	6	
6th.	Village of *Shue-leng-yi*, ...	5	
7th.	Village of *Koun-gan-hien*, ...	8	
8th.	Village of *Tshuon-leng-ye*, ...	5	
9th.	City of *Kyeng-tsó-fú*, (*Kin-tcheou,*) ..	6	
10th.	Village of *Kyeng-yeng-ye*, ...	9	
11th.	City of *Kyeng-mein-chow*, (*Kin-men,*)	9	
12th.	Village of *Leng-yan-ye*, ...	12	
13th.	Village of *Yi-tshein-hien*, ...	9	
14th.	City of *Thuon-tsheng*, where the mission stopped two days to prepare carriages for prosecuting the journey, (*Syang-yang ?*)	9	
	Travelled in 12 days, ...	81	Burmese *Taings*.

Date.	Names of places.	Taings.	Remarks.
17th Dec. ..	Left *Thuon-tsheng* in carriages, and stopped at the village of *Lyó-yeng-yi*, ...	6	
18th.	Village of *Theng-yé-hien*, ...	6	
19th.	Village of *Leng-yeng-yí*, ...	6	
20th.	City of *Nan-yan-fú*, (*Nan-yang*,)....	6	
21st.	Village of *Pó-wun-yi*, ...	6	
22nd.	City of *Yuí-chow*, (*Yu ?*)	6	
23rd.	Village of *Kyó-shyeng*, ...	9	
24th.	Village of *Shan-hien*, ...	9	
25th.	City of *Tshan-kó-shí*, ...	11	
26th.	Village of *Sheng-tseng-khyeng*, ...	6	
27th.	City of *Tseng-chow*, (*Tching ?*)	10	
28th.	Village of *Shyeng-tsé-hien*,....	6	
29th.	In consequence of a storm the mission stopped on the bank of the *Whún-hó* river this day, ...	1	
30th.	Village of *Khan-tshuon-yi*, where the mission stopped one day to enable some of the party detained crossing the *Whún-hó* (*Hoangho*) river, to come up, ...	5	
1st Jan. 1824.	Village of *Shyeng-shan-hien*, ...	6	
2nd.	City of *We-khue-fú*, (*One-kuin*,).....	6	
3rd.	Village of *Yí-koun-hien*,.....	12	
4th.	City of *Tshan-tay-fú*, (*Tchangte*,)....	7	"One of the male elephants died here."
5th.	City of *Tsán-chow*, ...	7	
6th.	Village of *Han-thán-hien*, ...	7	"One of the male elephants died here."
7th.	City of *Yuon-tek-fú*,(*Chunte ?*).....	12	
8th.	Village of *Nein-shí-hien*,....	6	
9th.	Village of *Pô-shyé-hien*,.....	6	"The female elephant died here."
10th.	Village of *Luon-tshóun-hien*,.....	12	
11th.	City of *Tseng-tein-fú*, (*Tching-ting*,)	6	Here is an image of GAUDAMA sitting cross-legged, placed in a *Ta-zaung* (4-cornered religious edifice) with five encircling gradations or stories.
12th.	Village of *Tsheng-lu-hien*, ...	9	
13th.	City of *Teng-chow*, (*Ting ?*)	6	Five days' journey from this place on *Tsú* or *Wú-tait-shan* hill, we were told, that there are two of GAUDAMA's canine teeth, and eight other teeth.
14th.	Village of *Puon-tsheit-khyó*, ...	9	
15th.	City of *Pauk-teng-fú*, where the mission stopped a day to receive presents, (*Pao-ting*,)	6	Here the Tsoun-tu of *Tsit-k* resides.
17th.	Village of *Ngan-shyú-hien*, (*Ngan ?*)	5	
18th.	Village of *Pe-khó*, ...	6	
19th.	City of *Tsue-chow*, (*Tso-tcheou*,)	9	
20th.	Village of *Tó-teng*, ...	6	
21st.	Village of *Tshan-shyen-teng*, ...	6	
22nd.	City of *Pé-kyín* (*Pé-kin*), where the *Udi-men* (king of the east, emperor of *China*) resides,.....	5	
	Travelled in 35 days, ...	247	Burmese *Taings*. Halted 81 days and travelled 140 days, altogether 221 days.

On returning from Pekin the mission marched by land that portion of the journey between Tshan-taik and Tsein-shuon, which they had before gone by water.

Date.	Names of places.	Taings.	Remarks.
17th April, 1824.	Left city of *Tshan-taik-fú*, and stopped at the eight villages of *Thuon-tauk-shán*,	7	
18th.	Village of *Shen-kyá-yi*,	7	
19th.	Village of *Tseng-teng-yi*,	6	
20th.	Village of *Kaik-teng-yi*,	7	
21st.	Village of *Má-teng-yi*,	7	
22nd.	City of *Shyeng-tsó-fú*,	7	
23rd.	Village of *Tshúon-khyi-yi*, where the mission stopped two days,	9	
26th.	Village of *Tshan-tán-yi*,	7	
27th.	Village of *Haik-yuón-yi*,	9	
28th.	Village of *Koún-byeng-nhéng*,	6	
29th.	City of *Yuón-tso-fú*,	6	
30th.	Village of *Pyan-yue*,	6	
1st May,	City of *Kuón-chow*,	6	
2nd.	Outside of a village in the jurisdiction of *Sheng-yit-kue*,	6	
3rd.	Village of *Tsheng-khye-hien*,	5	
4th.	City of *Tsein-shuon-fú*,	6	
	Travelled in 16 days,	107	Burmese *Taings*.

[To be continued.]

II.—*Note on the Facsimiles of Inscriptions from Sanchí near Bhilsa, taken for the Society by Captain* Ed. Smith, *Engineers; and on the drawings of the Buddhist monument presented by Captain* W. Murray, *at the meeting of the 7th June.* By James Prinsep, *Sec. As. Soc.*

All that I expressed a hope to see accomplished, when publishing my former note* on the Bauddha monument of *Sanchí*, has at length been done, and done in a most complete and satisfactory manner. We have before the Society a revision of the inscription with which we were but tantalized by Mr. Hodgson's native transcript:—a collection of the other scattered inscriptions alluded to by Captain Fell;—and pictorial illustrations of the monument itself and of its highly curious architectural details. Let us now take a hasty glance at the results, and see whether they have justified the earnestness of my appeal, and the punctuality, care and talent in responding to it displayed by Captains E. Smith and W. Murray.

The chief inscription is restored by Captain Smith's facsimiles so perfectly that every word can be read except where the stone is ac-

* Journal Asiatic Society, vol. III. p. 488.

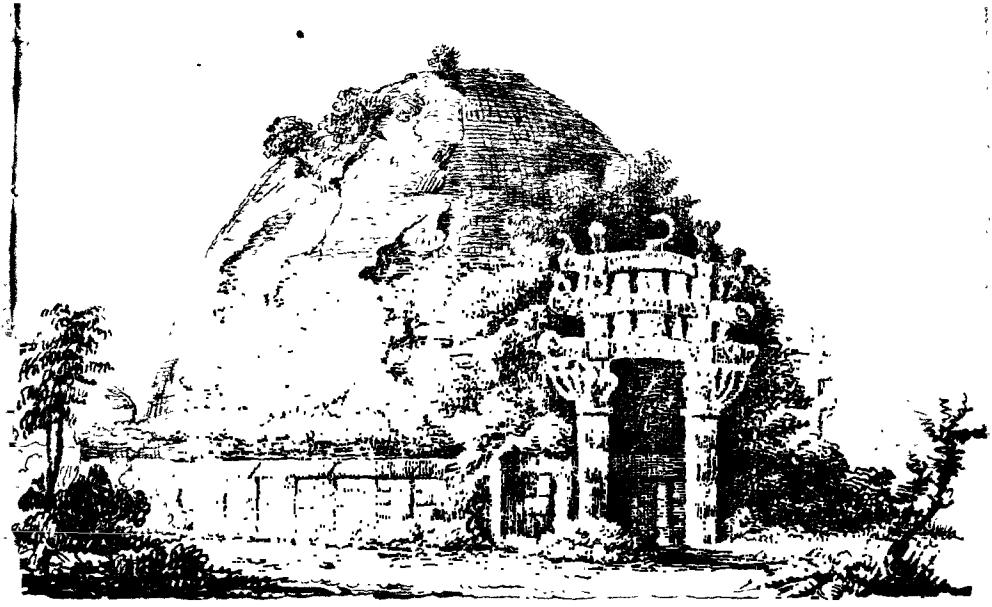
tually cut away. It contains, as will be seen presently, and as M. JACQUET was able to guess with infinite trouble from the former transcript, an allusion to Mahárája CHANDRA-GUPTA, with the advantage wanting in other inscriptions of this great prince, of a legible date. Moreover, it contains the name of the current coin of the period, and leads to very curious conclusions in regard to the source of the money of India at that time. A second inscription somewhat similar to the first, which had escaped Mr. HODGSON, has been brought to light: and in addition to these a number of minor inscriptions in the ancient lát character.

These apparently trivial fragments of rude writing have led to even more important results than the others. They have instructed us in the alphabet and the language of those ancient pillars and rock-inscriptions which have been the wonder of the learned since the days of Sir WILLIAM JONES, and I am already nearly prepared to render to the Society an account of the writing on Sultán FIROZ's lát at *Delhi**, with no little satisfaction that, as I was the first to analyze those unknown symbols and shew their accordance with the system of the Sanscrit alphabets in the application of the vowel-marks, and in other points, so I should be now rewarded with the completion of a discovery I then despaired of accomplishing for want of a competent knowledge of the Sanscrit language†.

As to Captain MURRAY's beautiful drawings, I only regret that it is impossible to do them justice in *Calcutta*. I have merely attempted in the accompanying lithographic Plates XXVIII. and XXIX. to give a reduced sketch, shewing the general outline of the building (of which a rough plan was published with my former note), and the peculiar form of the gateways, on one of which both the inscriptions were found. Of them Captain MURRAY writes: "The form of the gateways is, as far as I know, perfectly unique, and however it may outrage all the canons of architectural proportion, there is an according propriety in it perfectly in keeping with the severe simplicity of the boundary palisades and the massive grandeur of the lonely and mysterious mound; and its lightness is so combined with solidity and durability that it is with a mixture of awe, and reverence, and admiration you contemplate this unknown work of forgotten times."

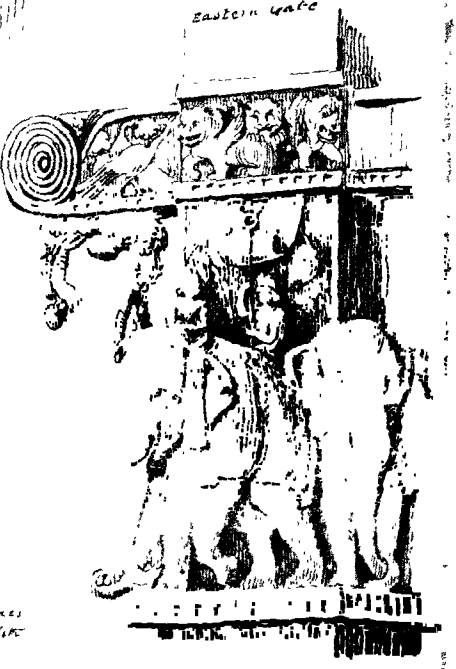
A native drawing of one of the sculptured compartments of the gates was made public by Dr. SPILSBURY. It represented the procession establishing the chaitya itself: a common subject on such monuments. Others exhibit the worship of the sacred tree of BUDDHA:—but the

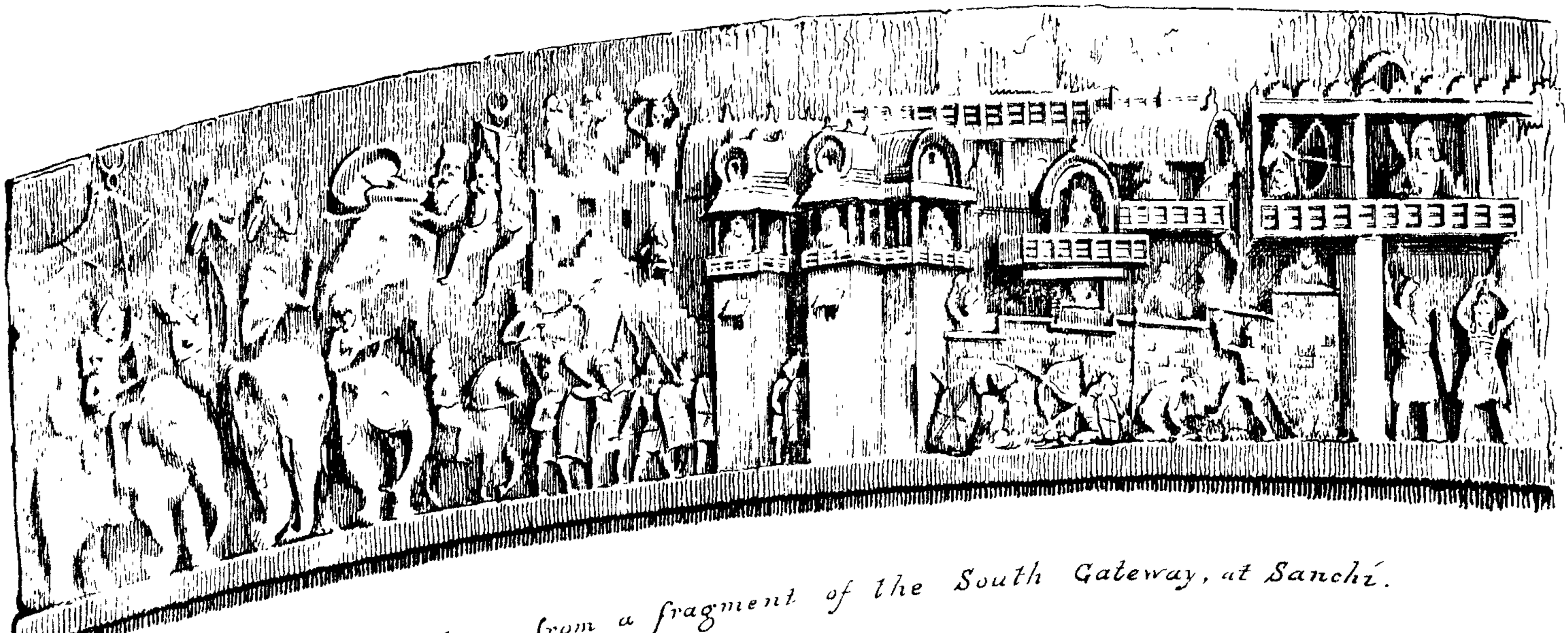
* Vide infra. † Journal Asiatic Society, vol. III. p. 117.



Eastern Gateway of the Sanchi Tope. Bhilsa.







Sculpture from a fragment of the South Gateway, at Sanchí.

W. Murray del.
J. Prinsep lith.

specimen selected by Captain MURRAY from one of the fallen gateways is more interesting from the costume of the warriors, which is perfectly Grecian. The banners also floating in the wind are extremely curious from the symbol occupying the place of the eagle on them, which the reader will instantly recognize as one of the monograms on the Buddhist series of coins, particularly on the two supposed by Colonel STACY to bear Greek inscriptions*. "These banners," Captain MURRAY writes, "are common, and the warriors bearing shields are in other places attendant upon chariots and horses in triumphal or religious processions."

An architect will admire the combination of elephants in the capital of the northern gate. "The teeth have been extracted or have dropped out, but in all other parts of the building they seem to have been carved in the block. Another capital is formed of a group of satyr's heads with long pointed ears and most ludicrous expressions of grief or merriment."

On a neighbouring hill are some very beautiful Jain temples in a totally different style of architecture. Of these also Captain MURRAY has favored the Society with a sketch, but it would be impossible to do it justice in lithography. It would be well worthy of the Asiatic Society to publish from time to time in England a volume of Hindu architectural remains from the materials in its possession. To this reference could be always made; and those who regarded only the works of art would find a volume to their taste, kept distinct (like the physical volume,) from the graver subjects of the Society's Researches.

The following is Captain SMITH's note accompanying the facsimiles of the *Sanchí* inscriptions, taken by him at the request of Mr. L. WILKINSON to whom I had written on the subject.

"All these inscriptions are found on the colonnade surrounding the building, and generally on the elliptical pieces connecting the square pillars. Though the inscriptions are numerous, I observed but three of any length, and of these two only from which I could hope to get off clear impressions; the third one was extremely obscure from the causes which render indistinct even those which I have copied. The cutting of most of the letters has originally been rough and irregular, and the surface of the stones appears from the first to have been but coarsely chiseled. Time has increased the irregularities of surface, and added to it an extremely hard moss, which overspreads the stones so completely as almost to conceal the letters from observation. I make this last remark, because I have little doubt

* Journal Asiatic Society vol. III. p. 117.

that a search among the fallen columns would detect many inscriptions besides those which my hurried visit allowed of my perceiving.

"There is a striking difference, which I should mention, in the execution of the inscriptions and of the sculpture with which the gateways are covered. The sculpture has all been designed and wrought with the greatest regularity and with uniform divisions into compartments; but the inscriptions are coarsely cut, and are found scattered without reference to the general design upon any stone that the workman's fancy seems to have led him to. So marked indeed is the inferiority of style in the inscriptions, that it is difficult to believe that they are the work of the same hands which produced the sculpture; and from their situation it is clear that they never formed part of the design of the gates or colonnade on which they are found. They have, on the contrary, more the appearance of being the rude additions of a period later in date than the erection of the building, and of one degenerated in taste and execution. Such are the appearances, but they may still be deceptive, for the inscriptions of the *Allahabad* column are by no means of the careful cutting that might be expected on a pillar so regularly tapered and nicely polished. The preceding remarks regarding the execution of the *Sanchí* inscriptions admit, however, of an exception, in that of the more perfect inscription No. 1; but though in this instance the cutting is clear and well arranged, the inscription itself still seems an irregular addition to the sculpture of the gate.

List of the Inscriptions.

"No. 1. Inscription from the front of the eastern gate. One copy on cloth two on paper.

At first this inscription appeared to me to be the same with that published in the 34th No. of the Journal of the Society, but I soon perceived that it was either altogether a different one, or that the engraved inscription had been copied from an incorrect impression.

No. 2. Inscription from the side of the eastern gate. One copy on cloth; two on paper.

No. 3. A line introduced on the border between two of the compartments of sculpture on the eastern gate.

Nos. 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, are from different parts of the colonnade, on which they are disposed without any regularity. They go to no greater length than a line or two; some are only of a few letters. ED. SMITH."

Taking the facsimiles in the order in which they are numbered by Captain SMITH himself, I will first describe the principal inscription, which I have carefully lithographed in Plate XXV. It records a money contribution and a grant of land by an agent of the ruling

Facsimile of the principal Inscription at Sanchee, Bhilsa.
Taken on cloth and paper by Captain L. Smith Engr. 1837.

J.Prinsep lith.

sovereign CHANDRAGUPTA, for the embellishment of the edifice (or perhaps for the erection of the ornamented gateway) and for the support of certain priests, and their descendants for ever.

The value of a facsimile in preference to a copy made by the eye was never more conspicuous than in the present instance. Turning to the engraving of Mr. HODGSON's copy in Vol. III. we find his artist has totally omitted all the left hand portion of the inscription which has been injured by the separation of a splinter in the stone! The initial letter of each line, is, however, distinctly visible on the stone beyond this flaw; and as not more than four or five letters in each line are thus destroyed, it is not very difficult to supply them, without endangering the sense. This has now been done by the Society's pandit; and the only place at which he hesitated was in filling up the amount of the donation in the seventh line, which may have been hundreds or thousands or upwards, but could hardly have been units, in a display of regal beneficence. The following is the text as restored by RÁMA GOVINDA, line for line from a transcript made by myself in the modern character. I have endeavoured to add a literal translation.

Transcript of Sanchí Inscription No. 1, in modern Nágarí.

कु [लधर्म्मासि] महाविहारग्रीलसमाधिप्रज्ञागुणभावितेन्द्रियाय यरमपुण्य
क्ष [तात्रमान्तर] गाभ्यागताय श्रमणपुङ्गवावसथायार्य्यसंघाय महाराजाधि
रा [जश्री] चन्द्रगुप्तपदप्रसादाप्यायितजीवितसाधन अनुजीविसत्पुरुषसङ्गाव
वृद्धि [मनुदिनं] प्रख्यापयन्अनेकसमरावाप्तविजययशस्तातः आकुलिदशन
षृ [कारिजनचे] प्रत्यदण्डेन एवोऽसुकादेवमजंनादभङ्गामुकरातिःराजकुलमूर्द्धैःक्रो
तप [दप्रदे] शे इसरवासकपञ्चमन्देश्या प्रणिपत्य ददाति पञ्चविंशतिस्व दीना
रस [हस्रंशतपदं] यदर्द्धेन महाराजाधिराजश्रीचन्द्रगुप्तस्य दवराज इति प्रि
थाना [त्मरप्रजाप्रो] तस्य सर्व्वगुणसम्पत्तय यावचन्द्रादित्यौ तावत् पञ्चभिक्षवा भुञ्ज
तां रत्नाट [हंप्रदो] पकोज्ञिखितं मम वा परार्द्धात् पञ्चैव भिक्षवो भुञ्जतां रत्नाटहप्र
दीपकं [इतिप] दंतत् प्रदत्तं य उच्छिन्द्यात्तस ब्रह्महत्यया संयुक्ताभवत् पञ्चभस्वान्न
त्यैरिति सं ⊕ ☰ भाद्रपद दिक्।

Translation.

"To the all-respected Sramanas, the chief priests of the *ávasath* ceremonial*, who by deep meditation have subdued their passions, the champions (sword) of the virtues of their tribe;—

* आवसथ, a fire temple, or place where sacrificial fire is preserved (WILSON's Dictionary); 'also a particular religious observance.' The latter is preferable, as the fire-worship is unconnected with the Buddhist religion.

The son of AMUKA, the destroyer of his father's enemies*, the punisher of the oppressors of a desolated country, the winner of the glorious flag of victory in many battles, daily by his good counsel gaining the esteem of the worthy persons of the court, and obtaining the gratification of every desire of his life through the favor of the great emperor CHANDRAGUPTA ;—having made salutation to the eternal gods and goddesses, has given a piece of ground purchased at the legal rate ; also five temples, and twenty-five (thousand ?) dinárs ; (half of which has been spent for the said purchase of the said ground,) as an act of grace and benevolence of the great emperor CHANDRAGUPTA, generally known among his subjects as Deva rája (or Indra).

As long as the sun and moon (shall endure,) so long shall these five ascetics enjoy the jewel-adorned edifice, lighted with many lamps. For endless ages after me and my descendants may the said ascetics enjoy the precious building and the lamps. Whoso shall destroy the structure, his sin shall be as great, yea five times as great as that of the murderer of a brahman.—In the *Samvat* (or year of his reign ?) ¾, (in the month of) *Bhádrapada*, the tenth (day.)"

There are two or three points in this document, if I have rightly interpreted it, of high interest to the Indian antiquarian.

1st. It teaches us that the current coin of the period was entitled *dinár*, which we know to be at the present day the Persian name of a *gold* coin, although it is evidently derived from the Roman *denarius*, which was itself of silver ; while the Persian *dirhem* (a silver coin) represents the *drachma*, or dram weight, of the Greeks. The word दीनार is otherwise derived in the Sanskrit dictionaries†, and it is used in books for ornaments and seals of gold, but the weight allowed it of thirty-two *ratis*, or sixty-four grains, agrees so closely with the Roman and Greek unit of sixty grains, that its identity cannot be doubted, especially when we have before us the actual gold coins of CHANDRAGUPTA (didrachmas) weighing from 120 to 130 grains, and indubitably copied from Greek originals in device as well as weight,

2nd. We have a positive date to this inscription—but how shall we read it ? The day of the month is plain, "*Bhádrapada dik*" in letters, the tenth (*δεκα*) of *Bhádrapada* (hod. Bhadoon.) It is in a form somewhat different from ordinary inscription dates, which, if founded on the luni-solar division of the year, necessarily allude to the light

* This epithet is doubtful : the pandit has supplied a letter क to make it intelligible अरभङ्गानु(क)रातिः

† दीन a pauper and दा to go—what is given to the poor! WILSON's Dictionary.

or the dark half of the lunation, *sudi* or *badi*. Further, in them the term *Bhádra* is generally employed for the name of the month, while *Bhádrapada* is usually applied to the *nacshatra* or lunar asterism: I cannot, however, insist on any inference hence, that this mode of reckoning was prevalent at the time of our inscription,) because the final *a* should be long, and the word *purva* or *uttara* should have been affixed to distinguish which mansion of the name was intended;) but only that the shorter term *Bhádra* had not come into use for the month. The year might be made the theme of still more prolific speculation. Taking the letter ৎ for *Samvat*, we have a circle inclosing a cross and three horizontal dashes to the right, ⊕ ≡. This might be plausibly construed into 1000 and 3; or 403;—or one *chakra* of the *Jovian* or *Vrihaspati* cycle of 60 years plus 3 years; and arguments might be adduced in support of all these theories, with exception perhaps of the last; for by the Tibetan account the Jovian cycle was not introduced into India earlier than the 9th century. But I rather prefer what appears to me a more simple interpretation, viz. that ৎ ⊕ stand for *Samvat*, and ≡ for three quarters,—this being the practical mode of expressing quarters in Indian numeration. *Samvat* we find every day to be used in the oldest inscriptions for the year of reign,—and it is well known that the Hindus do not reckon a year until it is passed. Supposing then that CHANDRAGUPTA made this grant through his agent the son of AMUKA, in the first year of his reign, say in the tenth month, there would be no other way of expressing the date in the Hindu system than by saying "$\frac{3}{4}$ year (being elapsed)." I offer this conjecture with diffidence, and invite the attention of orientalists to the curious point, with full assurance that there is no uncertainty in the reading of the facsimile, at this place.

The second inscription, which Captain SMITH states to be situated on the side of the same, or eastern, gate-post, has evidently been cut upon the stone after it was erected; as otherwise the precaution would have been taken of smoothening and polishing the surface for the better reception of the writing. It is, on the contrary, so slightly scratched that in the three facsimiles thus carefully taken, it is hardly possible in many places to distinguish between the letter marks and the natural roughnesses of the stone. The lithograph of it attempted in Plate XVI. was most impartially taken before any attempt had been made to read it, and on comparing it with the transcript in modern Nágari, as subsequently modified and corrected, many instances will be perceived in which my eye has been induced

* Captain CUNNINGHAM suggests 475, the $\frac{3}{4}$ being applicable rather to the century.

to follow the wrong path among the net-work of scratches. Without the facsimiles themselves to pore over, it would have been impossible to have conquered the various difficulties presented by this rude inscription, and even with it the Society's pandit, RÁMA GOVINDA, deserves great praise for the plausible version he has enabled me to give of it: for I have recompared his modifications with the original, and find in almost every instance that they are borne out by the facsimile. It is unnecessary to re-lithograph the document, as all those who will take the trouble of comparing the two will see in what way my pen has deviated from the correct trace, and it will serve as a good test of the superiority of facsimiles to the best copies made under the sole guidance of the eye.

The following then is RÁMA GOVINDA's restoration of the text; like its precursor, it is in prose, and without any invocation: nor has it any deprecation against the hand that should annul the good act recorded; but this is explained by the trifling nature of the gift, which does not include any grant of land.

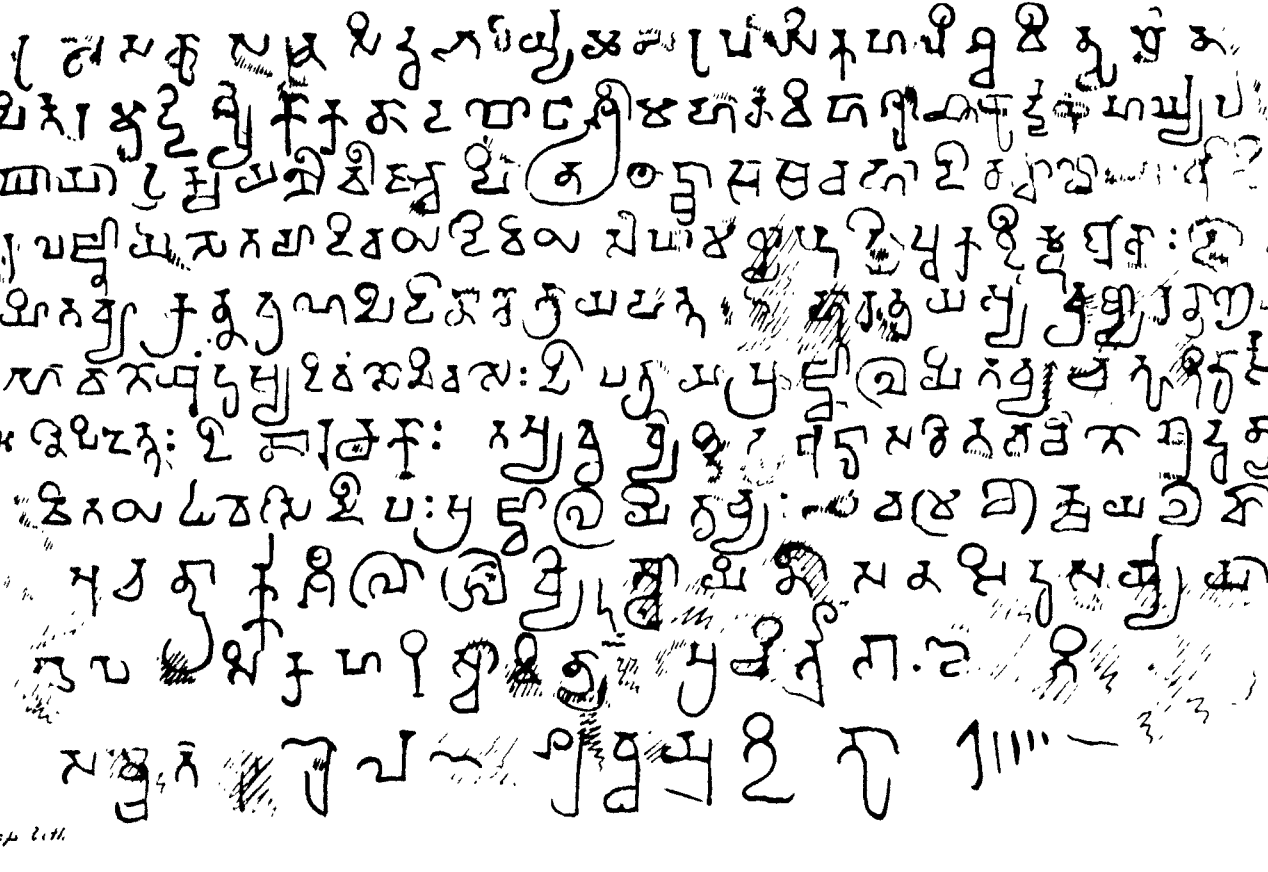
Second inscription at Sanchi, see Plate XXVI.

ऋद्धच्छासनसिद्धभार्य्यायाः परमोपासिकहरिस्वामिन्या माता पितरमुद्दिश्य काकुनादस्फोटश्रीमद्दविहारे इज्यमानार्य्यसं घायानुज्ञाये विपन्नादीनां मद्यावासत्थदीनारः भिक्षावृत्युच्छित्तये रत्नप्रज्वलिततया दिवसे दिवसे सीमामध्यप्रदीपको भिक्षाग्रकरभिक्षवे दापयितव्यः रत्नगृहेपि दीनारत्रयो दत्तः तद्दीनारत्रयस्य वृद्धा रत्नगृहचतुर्ब्रह्मस्य दिवसे दिवसे दीपत्रयं प्रज्वालयितव्यं चतुर्ब्रह्मासनेपि दत्तःदीनारचक्रः तस्य वृद्धा चतुर्ब्रह्मासने तथा चतुर्ब्रह्मस्य दिवसेदिवसे दीपाः प्रज्वालयितव्याः एवमेषां क्षयक्षविः आचन्द्रार्कशीला लेखक्षायिन्यासन सिद्धभार्य्यायाः
परमोपासिक हरिस्वामिन्या प्रचिचिता इति
संवत्।.....

Translation.

"I hereby make known to all the assembled devotees offering up prayers for the father and mother of HARISWÁMINÍ, the eminent disciple of the wife possessing the *ásan-siddh* or seat of purity, in the great and holy Vihára of *Kakunada sphota* (?), that for the prevention of begging in the public roads, an alms-house for the indigent, and

Facsimile of Inscription №2. from Sanchee, near Bhilsa



J. Bisset Lith.

also one dinár, day by day, for charitable distribution*, and a lamp shining like a jewel in the middle of the enclosure, are caused to be provided†.

In the *ratnagriha*‡ also are deposited three dinárs. With the interest, of these three dinárs in the *ratnagriha* or treasury of the four Buddhas§ day by day three lamps are to be lighted. For the shrines of the four Buddhas also is given a *chakra*‖ of dinárs, with the interest of which in the four shrines in like manner the lamps of the four Buddhas are to be kept lighted daily. And thus the beauty of all this (sculpture) durable as the sun and moon has been designed (or repaired) by HARISWÁMINÍ, the disciple of the unchangeable sculpture-enshrined *Siddha bhárayyá* (or emancipated wife).

Samvat..?..Sravan..?..Aditya."

All we learn from this inscription is, that a female devotee, HARISWÁMINÍ the pupil of the defunct lady abbess, probably, of the convent to which she belonged, either designed or repaired some of the basso-relievos we so much admire in their fallen state;—and we may thus account for the chasteness and elegance of the sculpture, while we do homage to the superior taste and imagination of the fairer sex. The provision for applying the interest of the small sums deposited by the same lady in the treasury of the Buddhist shrine to particular purposes, seems to imply that the establishment mixed in secular matters, and probably acted the part of bank to the surrounding district; in fact, the priesthood then possessed all the knowledge, the power, and the activity of the country, and we have adduced probable evidence on other occasions of their exercising the privilege of fabricating coin.

* Literally, to be given to beggars seated within the enclosure holding their hands out but not importuning passengers, as is to this day customary within the precincts of the most frequented temples.

† The *ásan* here intended is probably the wooden carved platform on which religious devotees reside in temples—using them at once as pulpits and as beds. The expression *rudhasvacchásaná siddh-bharyyáyah* seems to imply a wife who had turned priestess, and who had died on her sacerdotal couch. *Siddhásan* is a seat so pire that the devotee sutting in it can, at will, be transported any where thereon. *Siddha bharyya* my also be a name.

‡ Jewel house, treasury, or perhaps the sanctum of the shrine.

§ There are four niches containing images of Buddha on the four sides of the *dehgopa*.

‖ *Chakra* signifies a heap or quantity, but it would hardly thus be indefinitely used in such a place; it may then also denote 60, the number of the *Vrihaspati chakra* or cycle, or 12 for that of the sun: it is impossible to decide between them.

The date at the foot of this inscription is even more unintelligible than that of No. 1—not from obliteration, for the lines cut on the stone are here quite distinct, but from our ignorance of the numerals then employed:—the two or three figures following the word *Samvat* bear no resemblance whatever either to the modern Hindí or to the Cashmerian numerals. The month also is very dubious, and the letters that follow it may also be numerals—it is barely possible to read them as *aditya* (the sun) which on the system explained in Vol. IV. page 1, may stand for 12—or it may denote the day, Sunday. We are thus once more foiled in detecting the precise date of a record which it would have been of the greatest service to fix: and we must remain satisfied with the assurance that it was posterior to the erection of the gate in the reign of CHANDRAGUPTA.

And now for inscriptions 3 to 25 of Captain SMITH's catalogue;—the detached fragments cut irregularly on the pillars or rail surrounding the edifice, in the hitherto undeciphered character. I have introduced the whole of them into Plate XXVII. exactly as I find them in the facsimiles, except as to size, which in the original varies from one inch to two or three in the height of the letters. There is also great variety in the style of the engraving, and a regular progression in the form of the letters from the simple outline to the more embellished type of the second alphabet of *Allahabad*; (see No. 16). A more rigid search would doubtless have multiplied Captain SMITH's specimens, but this would have been labour thrown away; for however valuable these scraps may have been in unlocking the stores of knowledge contained in more important documents, they are individually of very trifling importance.

In laying open a discovery of this nature, some little explanation is generally expected of the means by which it has been attained. Like most other inventions, when once found it appears extremely simple; and, as in most others, accident, rather than study, has had the merit of solving the enigma which has so long baffled the learned.

While arranging and lithographing the numerous scraps of facsimiles, for Plate XXVII. I was struck at their all terminating with the same two letters,  . Coupling this circumstance with their extreme brevity and insulated position, which proved that they could not be fragments of a continuous text, it immediately occurred that they must record either obituary notices, or more probably the offerings and presents of votaries, as is known to be the present custom in

Inscriptions from Sanchee.
taken in fac-simile on paper by Capt. Smith &c

the same as nos 19 and 25

the Buddhist temples of *Ava*; where numerous *dwajas* or flag-staffs, images, and small *chaityas* are crowded within the enclosure, surrounding the chief cupola, each bearing the name of the donor. The next point noted was the frequent occurrence of the letter  , already set down incontestably as *s*, before the final word:—now this I had learnt from the *Saurashtra* coins, deciphered only a day or two before, to be one sign of the genitive case singular, being the *ssa* of the Pálí, or *sya* of the Sanscrit. "Of so and so the gift," must then be the form of each brief sentence; and the vowel *á* and *anuswara* led to the speedy recognition of the word *dánam*, (gift,) teaching me the very two letters, *d* and *n*, most different from known forms, and which had foiled me most in my former attempts. Since 1834 also my acquaintance with ancient alphabets had become so familiar that most of the remaining letters in the present examples could be named at once on re-inspection. In the course of a few minutes I thus became possessed of the whole alphabet, which I tested by applying it to the inscription on the *Delhi* column: but I will postpone my analysis of the alphabet until I have prepared a fount of type for it, when I may bring forward my attempted reading of the *lát* inscriptions; meanwhile, the following transcript in Roman letters of the *Sanchí* gifts will shew the data on which I have built my scheme, and will supply examples of most of the letters.

No. 3, the first in numerical order, is not one of the most legible, the first two letters being indistinct. It seems to run thus:

Rarasa (or *Karasa*) *nága piyasa, Achavade Sethisa dánam*; 'The gift of ACHVADÁ SETHI', the beloved of KARASA NÁGA.'

No. 4 and *No.* 11 are identical:—

Sámanèrasa Abeyakasa Sethinon dánam; 'The gift of SÁMANE'RA and ABEYAKA SE'TH.'

Sámanèra is the title of a subordinate order of the Buddhist priesthood. *Seth* is evidently a family name; and the same is now of common occurrence among the Jains—witness JAGAT SE'TH, the millionaire of *Moorshedabad*.

No. 5. *Dhamágálikasa máta dánam*; 'The gift of the mother of (?) DHARMAGARIKA.'

In *No.* 6 the first letter is doubtful:—

Gobavanágahapati nopati dhiyanusaya vesa mandataya dánam; 'The gift of the cowherd AGRAPATI, commonly called NOPATI, to the highly ornamented (chaitya ?).'

No. 7 is also doubtful in the three first letters:—

Subhageyamsa agínikeya dánam; 'The gift of SOBHAGEYA the fireman, (or black-smith.')

Here we learn what is amply confirmed by other examples, that the double consonants of the Sanscrit orthography are replaced by separate consonants, each having the required vowel; e. g. *agini* for *agni*.

No. 8 is of a more complex character :—

Siharakhitasa paravatiyasa rudováya dánam; 'The gift of SRI' (or SINHA) RAKHITA, the hillman, to RUDOVA.?'

No. 9 partially agrees with *No.* 6 :—

Gobavaná gahapati nopatidhíyasa dánam; 'The gift of AGRAPATI and NOPATI, the cowherds, so called. ?'

No. 10 is of the simplest construction :—

Vajajasa gámasa dánam; 'The gift of VAJJA, or probably VRIJA GRÁMA,' the population of a village in the province of *Vrija*, combining to make their offering.

No. 12. *Nadigatasa dánam bhichhuno.*

Here the caste, *bhichuno*, the beggar (*bhikshu*) seems to have been added after the record, to distinguish the party, a ferryman, *nadigata.?*

No. 13. *Arahagatáya dánam;* 'The gift of ARAHAGATÁ :' this is also a well-known title of the Buddhist hierarchy, *arhata*, or *arhanta;* and admitted, as in the instance before us, female devotees as well as male.

No. 14. *Chiratíyá bhichuníya dánam;* 'The gift of CHIRATI', the poor woman.'

No. 15. *Kádasa bhichuno dánam;* 'The gift of KÁDA, the poor man.'

No. 16 is in a different hand, more finished, and resembling the *No.* 2 of *Allahabad:* it has also a more studied elegance of expression: *Isipálitasa-cha, Sámanasa-cha dánam;* 'The gift both of ISIPÁLIT, (the protected of God,) and of SÁMANA (the priest).'

No. 17 partakes rather of the form of an obituary notice :—

Sethino mata kaniyá; 'The Sethin's deceased daughter!'

No. 18. *Kákènoye bhagavato pamáne rathi;* . . . . . 'in testimony of God'.. (the rest unintelligible). For *kákènoye* see note on insc. No. 1.

No. 20. *Araha dinasa bhikhuno pakharayakasa dánam;* 'The gift of the poor priest PAKHARAYAKA. ?'

No. 22. *Rudu barayarayasa pidarakhitasa dánam.*

The names here are nearly illegible from the rudeness of the sculpture. The first may be *Rudra bharyya* the wife of *Rudra.*

No. 23. *Panthakasa bhichhuno ruganarátupa. . . . . Budhapálitasa bhichhuno dánam;* 'The gift of PANTHAK, the poor man. . . . and of BUDDHAPÁLIT, the poor man.'

No. 25 is in very large characters :—

Vajágato dánam; 'The gift of VRIJÁGÁN,' of which the genitive termination will, by the *Páli* rules, be made by changing *án* into *ato*.

No. 21 has been reserved for the last, because it contains a second inscription in modern character :—the old writing is

Kékateyakasa dhama sivasa dánam ; 'The gift of KEKATEYAK DHARMASIVA.'

Under this in the modern Deva-nágarí,

रा श्रीसाव देव प्रणमतिनित्यं *Rá Srí Sáo Dèva pranamati nityam.*

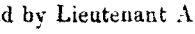
'*Rá* (for Rája or Ráo ?) Srí SAO DEVA for ever makes reverential salutation.'

The same formula occurs on two other stones, and the form of the letters would indicate that it has been introduced at a late period by some rich traveller on his pilgrimage,—and, moreover, a merchant, by his epithet *Sod.*

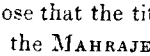
There is still one more short line in the old character, at the foot of the Sanscrit inscription *No.* 1, of some importance from its position, as it must evidently have been inserted after the latter, which Captain SMITH assures us is the only formal well-executed inscription likely to have been coeval with the structure of the edifice, or at least of the stone gateway. The party who chose this conspicuous place for cutting his name, did so, doubtless, from an ostentation, for which he paid high! He rejoiced in the name of DATTA KALAVADA, the line reading, *Datta Kalavaḍasa dánam ;* which may perhaps be interpreted *Dattakaravaḍasya dánam,* 'the gift of DATTAKARAVADA,' (the principal giver, of revenue. ?)

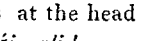
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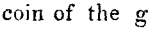
§ 2. *Application of the alphabet to the Buddhist group of coins.*

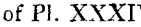
Having once become possessed of the master-key of this ancient alphabet, I naturally hastened to apply it to all the other doors of knowledge hitherto closed to our access. Foremost among these was the series of coins conjecturally, and, as it now turns out, correctly designated as the Buddhist series; and of these the beautiful coin discovered by Lieutenant A. CONOLLY at *Canouj*, attracted the earliest notice from the very perfect execution and preservation of the legend; (see Plate XXV. Vol. III. p. 433). The reading of this coin was now evident at first sight, as  *Vippa dèvasa;* which converted into its Sanscrit equivalent will be विप्रदेवस्य *Vipra devasya*, the coin of VIPRA DEVA. On reference to the Chronological Tables, we find a *Vipra* in the *Magadha* line, the tenth in descent from JARASANDHA, allotted to the eleventh century before the Christian era! Without laying claim to any such antiquity we may at least bespeak our *Vipra deva* a place in the *Indu vansa* line of *Magadha*, and a descent from the individual of the same name in the *Pauranic* lists.

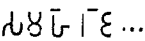
Other coins depicted in former plates may, in a similar manner, be read by the new alphabet.

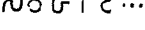
The small bronze coins of *Behat* (fig. 5, Pl. XVIII. vol. III. and fig. 16 of Pl. XXXIV. vol. IV.) have the distinct legend  in the square form of the same alphabet. The application of the word *mahárájasa* in the genitive, with no trace of a name, might almost incline us to suppose that the title itself was here used as a name, and that it designated the MAHRAJE, king of *Awadh*, of the Persian historians, who stands at the head of the third lunar dynasty of INDRAPRESTHA in the *Rájavali!*

The only other coin of the group which contains the same title is the silver decayed *Behat* coin, seen more perfect in General VENTURA'S specimen, (fig. 16 of Pl. XXXIV. vol. IV.) where may be read indistinctly  *Amapasátasa mahárája.. kunarasa.*

On the bronze *Behat* coin (figs. 11, 12, of Pl. XVIII. vol. III. and 3, 6, 9, of Pl. XXXIV. vol. IV.) though we have ten examples to compare, the context is not much improved by the acquisition of our new key: the letters are  *basa dhana kunaya dhaya;* (the second letter is more like  *bhu.*)

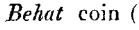
Col. STACY'S supposed Greek legends (figs. 2 and 3, of Pl. XXV. vol. III.) may be read (as I anticipated vol. III. p. 433) invertedly,  *Yagá bijana puta (sa?)*

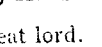
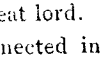
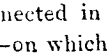
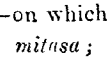
The larger copper coin, having a standing figure holding a trident (fig. 4, Pl. XXV. vol. III.) has very distinctly the name of  *.... Bhagavata cha* (or *sa*). A rája of the name of *Bhagavata* appears in the *Magadha* list, about the year 80 B. C.

On some of the circular copper coins we have fragments of a legend  *Bhamada.... vatapasa*, quasi *Bhímadeva tápasya*—but the last word is the only one that can be confided in.

On a similar coin, of which Colonel STACY has a dozen specimens (No. 47, Pl. XXXV. vol. IV.) the name of *Rámadatasa* 'of RÁMADATTA,' is bounded by the lizard emblem of *Behat.*

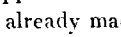
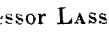
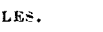
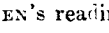
These are the only two in the precise form of the lát character—the other are more or less modified.

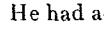
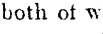
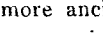
Another distinct group (that made known first by Mr. SPIERS) from *Allahabad*, (Pl. XXVI. figs. 12, 13, 14, 15, vol. III. page 448) can be partially deciphered by the lát alphabet. Capt. CUNNINGHAM has a fine specimen with the letters  *Rája Dhana devasya*—

'of rája *Dhana deva*,' a name not discoverable in the catalogues, though purely Sanscrit. On three more of the same family we find  *Navasa*. On one it seems rather  *Narasa*, both *nava* and *nara* being known names. On another  *Kunamasa*; and on another, probably,  *Mahápati*, the great lord.

The bull coins of this last group are connected in type, and style of legend, with the "cock and bull series"—on which we have lately read, *Satya mitasa*, *Saya mitasa*, and *Bijaya mitasa*; so that we have now a tolerably numerous descending series of coins to be classed together from the circumstance of their symbols, of their genitive termination, and their Páli dialect and character, as a Buddhist series, when we come again to review what has been done within the last few years in the numismatology of India.

But the most interesting and striking application of the alphabets to coins is certainly that, which has been already made (in anticipation, as it were, of my discovery) by Professor LASSEN, of Bonn, to the very curious Bactrian coins of AGATHOCLES.

The first announcement of Professor LASSEN's reading of this legend was given in the Journal for 1836, page 723. He had adopted it on the analogies of the Tibetan and Páli alphabets, both of which are connected with, or immediately derived from, the more ancient character of the láts. The word read by him, rája, on some specimens seems to be spelled *yája*  rather than  *lája*, a corruption equally probable, and accordant with the Páli dialect in which the *r* is frequently changed into *y*, or omitted altogether. I am, however, inclined to adopt another reading, by supposing the Greek genitive case to have been rendered as literally as possible into the Páli character; thus  *Agathuklayej* for Αγαθοκλεως; this has the advantage of leaving the letters on the other side of the device for the title of *rája* of which indeed the letter  is legible.

I am the rather favorable to this view because on the corresponding coin of PANTALEON, we likewise find both the second vowel of the Greek represented by the Sanscrit semivowel, and the genitive case imitated:—supplying the only letter wanting on Dr. SWINEY's coin, the initial *p*, of which there are traces in MASSON's drawing, the word  *Pantelewanta* is by the help of our alphabet clearly made out—the *anuswara*, which should follow the  being placed in the belly of the letter instead of outside; and the *a* being attached to the centre instead of the top of the  , where for the sake of uniformity I am obliged to place it in type.

The discovery of these two coins with *Pálí* characters, is of inestimable importance in confirming the antiquity of the alphabet; as from the style of AGATHOCLES' coins he must necessarily be placed among the earliest of the Bactrians, that is, at the very period embraced by the reign of ASOKA the Buddhist monarch of *Magadha.*

On the other hand the legend throws light on the locality of Agathocles' rule, which instead of being, as assigned by M. RAOUL DE ROCHETTE, in *Haute Asie,* must be brought down to the confines, at least, of India Proper.

As however the opinions of this eminent classical antiquary are entitled to the highest consideration, I take this opportunity of making known to my readers the substance of his learned elucidation of this obscure portion of history given in a note on two silver coins of AGATHOCLES, belonging to the cabinet of a rich amateur at *Petersburg,* published in the *Journal des Savans,* 1834, p. 335.

" In the imperfect accounts transmitted to us of the troubles occasioned to the Seleucidan kingdom from the invasion of PTOLEMY PHILADELPHUS, and of the loss of entire provinces after the reverses of ANTIOCHUS II. *Theos,* the foundation of the Arsacidan kingdom by the defection of the brothers ARSACES and TIRIDATES is an established point, fixed to the year 256 B. C. But the details of this event, borrowed from ARRIAN's " *Parthics,*" have not yet been determined with sufficient care, as to one important fact in the Bactrian history. From the extracts of various works preserved in PHOTIUS, the defection of the Parthians arose from an insult offered to the person of one of these brothers by the Macedonian chief placed by ANTIOCHUS II. in charge of the regions of *High Asia* and named *Phéréclès.* The two princes indignant at such an outrage are supposed to have revenged themselves with the blood of the satrap, and, supported by the people, to have succeeded in shaking off the Macedonian yoke.

This short notice from PHOTIUS has been corrupted by transcribers in the name of the chief *Péréclès,* which modern critics have failed to correct by a passage in the *Chronographia* of SYNCELLUS, who had equally under his eyes the original of ARRIAN and who declares expressly that " ARSACES and TIRIDATES, brothers, issue of the ancient king of Persia, ARTAXERXES, exercised the authority of satraps in *Bactria* at the time when AGATHOCLES the Macedonian was governor of *Persia;* the which AGATHOCLES, having attempted to commit on the person of the young TIRIDATES the assault before alluded to, fell a victim to the vengeance of the brothers, whence resulted the defection of the country of the Parthians and the birth of the Arsacidan kingdom." AGATHOCLES

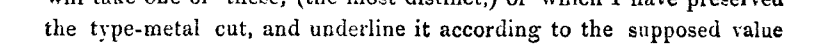
is called by SYNCELLUS, Ἔπαρχος τῆς Περσικῆς, while PHOTIUS calls him (under an erroneous name) Σατράπην αὐτῆς τῆς χώρας καταστάντα, appointed by ANTIOCHUS THEOS; so that no doubt whatever could exist as to their identity, although until the discovery of the coins, there was no third evidence whence the learned could decide between the two names. The presumption might have been in favor of AGATHOCLES, because among the body-guard of ALEXANDER was found an ANTYLOCUS, son of AGATHOCLES, who by the prevailing custom of his country would have named his son AGATHOCLES, after his own father."

M. RAOUL DE ROCHETTE proceeds to identify this eparch of *Persia* with DIODOTUS or THEODOTUS the founder of the Bactrian independency. Supposing him to have seized the opportunity of striking the blow during the confusion of ANTIOCHUS' war with PTOLEMY, and while he was on deputation to the distant provinces of the *Oxus*,—that he was at first chary of placing his own head on his coin, contenting himself with a portrait of BACCHUS,—and his panther on the reverse:—but afterwards emboldened to adopt the full insignia of royalty. Thus according to our author a singular shift of authorities took place—ARSACES the satrap of *Parthia* quits that place and sets up for himself in *Persia*, in consequence of the aggression of DIODOTUS (or AGATHOCLES) *king of Bactria* who had originally been eparch of *Persia*:—both *satraps* becoming *kings* by this curious bouleversement. The non-discovery of THEODOTUS' medals is certainly in favor of M. RAOUL DE ROCHETTE's argument, but the present fact of a Hindí legend on his coin militates strongly against his kingdom being thrown *exclusively* to the northward. By allowing it to include *Parthia* Proper, or *Seistan*, and the provinces of the *Indus*, this difficulty would be got rid of; but still there will remain the anomaly of these Indian legends being found only on AGATHOCLES and PANTALEON's coins, while those of MENANDER, who is known to have possessed more of India Proper, have only the Pehlevi reverse. AGATHOCLES' rule must have included a sect of Buddhists *somewhere*, for besides the letters we find their peculiar symbol present on many of the panther coins. At any rate we have certainty of the existence of our alphabet in the third century before Christ, exactly as it exists on our Indian monuments, which is all that on the present occasion it is relevant to insist on.

§ 3. *Application of the alphabet to other inscriptions, particularly those of the lats of Upper India.*

Another convenient test by which the newly found alphabet can be proved was the Rev. Mr. STEVENSON's facsimile of the *Carlí* inscriptions published in the 3rd volume of the Journal, p. 428. I

will take one of these, (the most distinct,) of which I have preserved the type-metal cut, and underline it according to the supposed value of each letter.

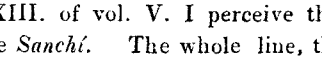


Maháriviságotiputasa atimitarakasapi háthatadára.

This is not a facsimile, therefore I dare not assume that it is accurately rendered. I should myself incline to think that the final letter was an ⊥ or *n*, producing the word so often found at *Sanchí*,—*dánam*; making it 'the gift with his own hand (*hasta dánam*) of *Atri mitraka*, the son of the great *Ráviságoti*.'

But I advance this reading with doubt, and merely to invite the attention of Mr. STEVENSON himself to the revision of this and the other *Carlí* inscriptions with which he was so obliging as to favor me, when we were as yet only on the threshold of the inquiry.

Again: It will be remembered that one of the inscriptions sent down in facsimile last year by Mr. HATHORNE from *Buddha-gaya**, was in the lát character. It was found engraved on a pillar *now* forming the stancheon of an upper story in the convent, but was supposed formerly to have stood near the temple. On turning to my lithograph of it in Plate XXXIII. of vol. V. I perceive the concluding word *dánam* exactly as the *Sanchí*. The whole line, though very roughly engraved, may be now easily read as



Ayalekuddangáye dánam;

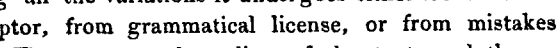
'The gift of AYALEKU DANGÁ.' If the ill-defined mark below the + be a □, the reading may be *Buddagaye dánam*, 'gift to BUDDHA-GAYA.'

The foregoing are, after all, but trifling ordeals for the new alphabet, compared with the *experimentum crucis* of the *Delhí* lát inscription, which the antiquarian reader will not be satisfied until he sees performed in his presence. To this, then, I will now hasten, contenting myself with one or two sentences to demonstrate the perfect applicability of the system, and reserving for a future occasion the full interpretation of this strangely multiplied and important document, which it would be hardly fair to expect to read off-hand, even though it were written with entire orthographical precision, which a slight inspection has proved by no means to be the case.

I cannot select a better example for our first scrutiny than the opening sentence of the inscription. This I shewed in my former papers on the subject to be repeated over and over again in all the lát inscriptions

* See Plate XXXIII. of Vol. V. and page 658.

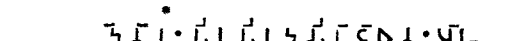
of Upper India ; and the recent accession of the *Girnar* inscription of *Gujerat*, transmitted by Mr. WATHEN, and of the *Aswastuma* inscription of *Cuttack* executed with such fidelity by Lieutenant KITTOE, has proved that it belongs equally to them, although in other respects both these texts differ from those already known to us. Thus from the very numerous examples of this passage, we have an opportunity of observing all the variations it undergoes either from carelessness of the sculptor, from grammatical license, or from mistakes of the copyist. The most usual reading of the text, and the equivalent according to my alphabet, are as follows :



Devánamapiya piyadasi lája hevam ahá.

Here we perceive at once that the language is the same as was observed on the *Bhilsa* fragments,—not Sanskrit, but the vernacular modification of it, which has been so fortunately preserved for us in the *Pálí* scriptures of *Ceylon* and *Ava*. *Devánam piya* (oftener *piye*) *piyadasi lája*, is precisely the Sanskrit, देवानां प्रिय प्रियदर्शि राजा, 'the lovely rája *Devánámpriya*;' or, with equal propriety, 'the beloved of the gods king PIYADASSI;' for either or both, may be the prince's name. *Hevam ahá*, (or rather *evam ahá* for the *h* belongs to the word *lája*,) I recognized at once as an old friend in the *Pálí* version of the Buddhist couplet *ye dharmma*, &c. so thoroughly investigated in the Journal for March, 1835 : *evam áha*, 'thus spake.'

Many of the repetitions of this initial sentence abound in trifling errors, especially in the vowel marks, and in the letters of nearly similar form, as *p* and *h*. These it is not worth while to notice, except as a caution against too implicitly following the text in other places, where such slight alterations will restore intelligibility. But RATNA PAULA the Pálí scholar, whom I immediately invited to assist me in reading the inscription, could critically take objections to other inaccuracies which were repeated in every instance of the pillar text. Thus the double *s* was wanting in *dasi* ; the nominative *lája* should be written *rájá* ; *hevam*, *evam* ; and *ahá*, *áha*. Satisfied that these were but the licenses of a loose vernacular orthography, as particularly evinced by the interchange of the liquids *l* and *r*, I was little abashed in finding the same errors on the *Bakra* and *Betiah* láts, and even on the *Cuttack* cave inscription :—and it was with a degree of surprise and joy proportionate to the absence of expectation, that on looking over the *Girnar* version, I found all three of the grammatical errors removed ! The *Girnar* text is thus conceived :

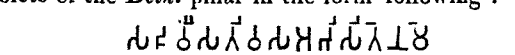


Devánampiya Piyadasi rájá evam áha.

Thus the anomalous use of the *l*, the value of the vowel *e*, and the identity of the language with the grammatical *Páli*, were explained and confirmed. Other variations equally useful were extracted :—thus in another part of the *Girnar* text the name was found in the instrumental case, *Devánampiyena Piyadasina ;* ' by *Devánam-piya*, the beloved.' Sometimes the name is contracted as at the conclusion of the *Delhí* text, ' *eta devánampiya áha*' (for *etam*), ' the foregoing spoke the rája.' In other places the name is *Devánampiyadasi*, without the second *piya*, and *lája* or *rája* is often omitted. But one of the most important variations occurs again in the *Girnar* text ; *Devánam piya piya dasi rája yasovakíti*, where *yasovákíti*, for *yasa uvácha iti**, ' lo this spake he,' (or *vakti*, speaks) is substituted for the ordinary form, *evam áha*.

Collecting together the above evidence, I think it will be admitted that the initial sentence is satisfactorily determined†, and that it has every appearance of being the declaratory formula of some royal edict, or some profession of faith. The simplicity of the form reminds us of the common expression in our own Scriptures—" Thus spake the prophet ;" or in the proclamation of the Persian monarch—" Thus saith CYRUS, king of Persia." There is none of that redundant and fulsome hyperbole which we find in the Sanskrit grants and edicts of later days.

I should have been inclined to expect from the extensive distribution of the document over districts, never, as far as we know, governed by a single Indian monarch, that it rather contained the doctrines of some great reformer, such as SHÁKYA, to whom the epithets *devánampriya priya-darsi* might be applied. But not to mention the inapplicability of the title *rája* to such a person, the next sentence, which is also repeated several times, sets the matter of its royal authorship at rest. This sentence follows the opening just described, on the north, south, and west tablets of the *Delhí* pillar in the form following :

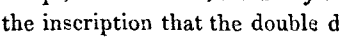


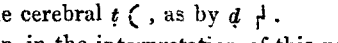
Saḍḍavísati vasa-abhisitena mè, which RATNA PAULA immediately read as *satta vísati vasse abhisittena me*, ' in the twenty-seventh year

* The Páli *vák* is the Sanskrit वाक्, synonimous with वाच् speech.

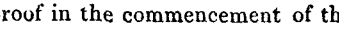
† The Rev. Mr. STEVENSON'S reading was देवानंपिये पिय दसो मागमद which he translated, " In the two ways (of wisdom and of works ?) with all speed do I approach the resplendent receptacle of the ever-moving luminous radiance."

of my reign.' The anomalous form of the second letter perplexed me for some time, and it was only after collation with other readings of the same passage that I became persuaded of its being a double *ḍ*. Thus I found sometimes  or *saḍḍa*, and once  *sata*, but generally  , the lower stroke seeming to imply duplication. That the *ḍ* should be substituted for *tt* agreed with the observation by Messrs. BURNOUF and LASSEN of the frequent interchange of these letters in their analysis of a *Páli* manuscript, the *Boromat*, from *Ceylon*. I have also found in other parts of the inscription that the double dental *t* is as frequently rendered by the cerebral *ṭ*  , as by *ḍ*  .

That we are not mistaken in the interpretation of this passage we have the most satisfactory proof in the commencement of the eastern tablet, which perhaps ought to rank first, as it speaks of an earlier date. The expression here is  *Duwáḍasa vasa abhisitena mè*; 'In the *twelfth* year of my reign.' It may be perhaps objected that *duwáḍasa* is a very corrupt mode of writing *dwádasa*, 'twelve:' the separation into two syllables of *dwá*, and the substitution of the cerebral *ḍ* being too great a latitude to sanction unexplained. Here again, fortunately, other manuscripts come to our aid. In the *Cuttack* inscription just received from Lieutenant KITTOE we find the dental *d* restored; and the undue collision of the two short *a*'s grammatically corrected, thus:

 *duwádasa vasábhisitenamè**,

leaving the first error still uncorrected; but this again disappears when we turn to the *Girnar* version, which seems generally to have been executed with greater orthographical propriety. It is there, (38th line)—



Dwádasaváśábhisitena devánam daya piya ṭhisa.

This is on other accounts a most important variation, because it shews the value of the abbreviated pronoun *mè* (*mama*) 'of me,' to have been correctly rendered. The pronoun would in the present instance be superfluous, because it is replaced by the name of the rája; which has also two remarkable deviations from the common spelling—*daya* for *piya* may be a fault in transcription, but it is also translatable. The substitution of *thisa* for *dasi*, a change not so easily explained, leads us to an inquiry who this potentate could have been, to spread his edicts thus over the continent of India?

* The facsimile has *ábhisátenamè*,—a mistake, probably, in copying.

In all the Hindu genealogical tables with which I am acquainted, no prince can be discovered possessing this very remarkable name. If there ever reigned such a monarch in India, his memory must have been swept away with every other record of the Buddhist dynasties we know to have ruled in India unrecorded by fame: but if any explanation can be afforded short of supposing such an entire obliteration, and if it can be supported, moreover, by collateral facts, we are bound to give it a preference rather than make darkness more obscure by multiplying imaginary existences.

Such explanation can be satisfactorily supplied from the annals of a neighbouring country, and this is the third occasion in which we have been indebted to them for the elucidation of obscure occurrences in India Proper. In Mr. TURNOUR's epitome of Ceylonese History, then, we are presented once, and once only, with the name of a king, *Devenipeatissa*, as nearly identical with ours as possible, (especially the last reading of the name,) and bearing, as RATNA PAULA informs me, precisely the same derivation.

DEVENI PEATISSA succeeded his father on the throne of *Ceylon* in the year of Buddha 236, or B. C. 307. One of his first acts is thus related by Mr. TURNOUR:—

"He induced DHARMÁSOKÁ, a sovereign of the many kingdoms into which *Dambadiva (Jambudwipa*, or India) was divided, and whose capital was *Pattilipatta*, (*Patna*) to depute his son MIHINDU' and his daughter SANGAMITTÁ, with several other principal priests, to *Anúrádhapúra* for the purpose of introducing the religion of BUDDHA. They arrived in the year 237, the first of this reign and eighteenth of that of DHARMÁSOKÁ. They established Buddhism, propagating its doctrines orally. The *bo*-tree was brought and planted at *Anúrádhapúra* on the spot where the sacred trees of former BUDDHAS has stood. The right jaw-bone of BUDDHA was obtained from SAKRAYA himself, and a cup full of other relics from DHARMÁSOKÁ. The king built the *vihare* and *dágoba* called *Toohpaaraamaya*, in which the jaw relic was deposited; sixty-eight rock temples with thirty-two priest's chambers on *Mihintallai*; the *Mahá vihare*, the *Issaramúni vihare*, the *Saita chaitya dágoba*, and the *Issa-ramaya dágoba* and *vihare*; and formed the *Issa vèva* tank. ANULÁ, the principal queen, and many inferior wives of the king, assumed priesthood*."

The age of the great ASOKÁ, the third or fourth in descent from CHANDRAGUPTA, is one of the well known epochs of the promulgation of the Buddhist faith. It was also the most flourishing period of the Ceylonese sovereignty then enriched by a commerce which has in subsequent ages gradually passed into other channels. The monu-

* TURNOUR's Epitome of Ceylonese History, Ceylon Almanac, 1833.

ments and rock excavations attributed to the ancient sovereigns of *Ceylon* abound with inscriptions in a character not essentially differing from these four on the continent of India. We have thus a strong primâ facie argument in favor of the hypothesis that DEVÁNAMPIYATISSA, the royal convert, caused, in his zeal, the dogmas of his newly adopted faith to be promulgated far and wide at his expense. It is true that, according to the *Mahávansí*, the Buddhist doctrines were not reduced to writing (*i. e.* in books) in *Ceylon* until 217 years, 10 months and 10 days after its oral promulgation by MIHINDÁ, ASOKÁ's brother, in the year above fixed,—or " while VALAGAMABAHU, the 21st sovereign of the *Vijaya* line, was still a disguised fugitive;" that is, about the year 90 B. C.; but this fact tells rather in favor of other modes being previously used to make known, and to record irrevocably the new rules of conduct; and we might easily cite a more ancient and venerable example of thus fixing the law on tablets of stone. But I have not yet shewn that such is the nature of our inscription:—as yet, we are ignorant what happened in the twelfth and the twenty-seventh year of king DEVÁNAMPIYADISA'S receiving the holy unction, *abhisheka*. To ascertain this, we must continue our analysis one step further. On the south, east, and west sides of the *Delhí* column, as well as in the body of the text, the text left unfinished above is thus concluded: 𑀬𑀁 𑀥𑀫𑁆𑀫𑀮𑀺𑀧𑀺 𑀮𑀺𑀔𑀸𑀧𑀺𑀢𑀸 *iyam dhammalipi likhápitá*, which may be exactly translated, 'This *dharma-lipi*, or writing of the law, is caused to be written.' All doubt as to the nature of the document is thus removed, and we have the fullest confirmation of the theory just broached. The variations of the reading are few—𑀅𑀬𑀁 *ayam* is more correctly put for *iyam* in the *Girnar* version (*lipi* being neuter in Páli, though feminine in Sanskrit):—and in the following sentence which winds up the *Delhí* inscription, we have *dhammalibi* twice used for *dhammalipi*, exactly the license allowed in Sanskrit, धर्मलिपि and धर्मलिबि being synonimous: these seemingly trivial variations are of great force in establishing the value of the letters interchanged:

Iya dhammalibi likhaápitáti eta Devánampiya dhá: 'Iyam dhamma libi ata atha silathabhániva siladhakaniva tata kataviya ena esa chilathiti siya.' Which seems to imply, though the precise meaning is not yet well made out: " Having caused to be engraven this *dharmalibi*, DEVÁNAMPIYA thus declared: 'This *dharmalibi*, in like manner as it is now fixed upon enduring rock, so may all continue for ever in the performance of it.'" *Silasthápan*, if long, would mean the establishment of Buddha's doctrines. *Chila ṭhiti siya*, is evidently the Sanskrit *chiran sthiti siyát*.

The contents of the *dharmalipi* itself I must reserve for further examination with the aid of those who are more competent to analyze the peculiarities of its phraseology. From the cursory view I have taken of it with RATNA PAULA, I may in some measure meet the curiosity of the reader's inquiries, by stating that it treats of the fruits of virtue and vice—that it points out what animals are to be cherished and what are not proper for food—what days, of the lunar month, are to be esteemed holy, &c.; with much about the increase of virtue, but no mention of the name of BUDDHA, SHAKYA, or GAUTAMA—nor of any member of the Hindu Pantheon. It is, however, quite impossible to say as yet what are the contents of this genuine relic of antiquity,—perchance a much more genuine relic of the Indian reformer than any of the bones, teeth or hair of this sacred personage that have been preserved in golden caskets or buried under stone pyramids in various spots! But its chief recommendation is the philological value it possesses, of higher authority even than all the books of *Nípál* or *Ceylon*, in determining the knotty dispute as to the language in which the reformed religion of SHAKYA was preached and spread so effectually among the people. It is now evident that, as with the *Kabírpanthís*, the *Dadupanthís*, the *Sikhs*, the *Rámsanèhís*, and all the sects who have appealed to the common sense of the people against the learning and priestcraft of the schools, the language of the appeal employed by the disciples of SHÁKYA was the vernacular idiom of the day.

A few words, in conclusion regarding the alphabet, of which I have had a fount prepared while this article was setting up for press.

There is a primitive simplicity in the form of every letter, which stamps it at once as the original type whereon the more complicated structure of the Sanskrit has been founded. If carefully analyzed, each member of the alphabet will be found to contain the element of the corresponding member, not only of the Deva-nágarí, but of the Canouj, the Pálí, the Tibetan, the Hala Canara, and of all the derivatives from the Sanskrit stock.

But this not all: simplification may be carried much farther by due attention to the structure of the alphabet, as it existed even at this early stage, and the genius of its construction, *ab initio*, may in some measure be recognized and appreciated.

First, the aspirated letters appear to have been formed in most cases by doubling the simple characters; thus,  *chh* is the double of  *ch*;  *th*, is the double of  *t*;  *dh*, is the half of this; and  *th*, is the same character with a dot as a distinguishing mark: (this may account for the constant interchange of the  ,  ,  , and  , in

the inscriptions.) Again; 𑀥 *dh*, is only the letter 𑀦 produced from below—if doubled it would have been confounded with another letter, (the 𑀥.) The aspirated *p* 𑀨, is merely the 𑀧 *p*, with a slight mark, sometimes put on the outside either right or left, but I cannot yet affirm that this mark may not merely denote a duplication of the letter rather than an aspiration—if indeed the terms were not originally equivalent; for we have just seen the *doubling* of the letter made to denote its *aspiration*.

The *kh* seems formed from the *g* rather than the *k*:—the *gh* and *jh* are missing as in Tibetan, and appear to be supplied by *g* and *chh* respectively. *bh* is anomalous, or it has been formed from the *ḍ* by adding a downward stroke.

Again; there is a remarkable analogy of form in the semivowels *r, r, l, y,* 𑀮, 𑀚, 𑀛, 𑀜, which tends to prove their having been framed on a consistent principle:—the first *r* hardly ever occurs in the *Delhí* inscription, but it is common in that from *Girnar*. The *h* 𑀳, is but the 𑀛 reversed: the *rĭ* so peculiar to the Sanskrit alphabet is formed by adding the vowel *i* to the *r* thus, 𑀭𑀺.

As far as is yet known, there are only one *n**, and one *s*: the nasals and sibilants had not therefore been yet separated into classes; for the written *Páli* of 200 years later possesses at least the various *n*'s, though it has but one *s*.

The four vowels, initials, have been discovered 𑀳, 𑀲, 𑀇, 𑀉; *a, i, e, u*. The second seems to be the skeleton of the third, as if denoting the smallest possible vocal sound. Of the medial vowels it is needless to speak, as their agreement in system with the old Nágarí was long since pointed out. The two long vowels *í* and *ú*, are produced by doubling the short symbols. The *visarga* is of doubtful occurrence, but the *anuswara* is constantly employed; and when before *m*, as in 𑀥𑀁𑀫, *dhamma*, it is equivalent to the duplication employed in the more modern Pálí writing. The following, then, is our alphabet, arranged in the ordinary manner.

Gutturals.	𑀓 𑀔 𑀕 𑀖 𑀗	*k kh g gh ng*	क ख ग घ ङ
Palatials.	𑀘 𑀙 𑀚 𑀛 𑀜	*ch chh j jh ny*	च छ ज झ ञ
Cerebrals.	𑀝 𑀞 𑀟 𑀠 𑀡	*ṭ ṭh ḍ ḍh ṇ*	ट ठ ड ढ ण
Dentals.	𑀢 𑀣 𑀤 𑀥 𑀦	*t th d dh n*	त थ द ध न
Labials.	𑀧 𑀨 𑀩 𑀪 𑀫	*p ph b bh m*	प फ ब भ म
Semivowels,&c.	𑀬 𑀭 𑀮 𑀯 𑀰 𑀱 𑀲	*y r l v s h*	य र ल व स ह
Vowels.	𑀳 𑀲 𑀇 𑀉 𑀭𑀺	*a i e u rĭ*	अ इ ए उ ऋ

* I think the *Girnar* and *Ceylon* inscriptions will be found to have the other nasals made by modification of the primary 𑀦. There are other letters in these texts not found in the *láts* of this side of India.

We might perhaps on contemplation of these forms go yet farther into speculation on their origin. Thus the *g* may be supposed to be formed of the two strokes of the *k*, differently disposed: the *j*, of the two half curves of the *ch* superposed: the two *d*'s* are the same letter turned right and left respectively; and this principle, it may be remarked, is to be met with in other scions of the Indian alphabet. Thus in the Tibetan the *z* ཟ, a sound unknown to the Sanskrit, is made by inverting the *j* ཇ; the cerebral *ṇ* ཎ, by inverting the dental ན:—and the cerebral *ṭ*, *ṭh*, or ཊ, ཋ, by inversion of the dental *t*, *th*, ཏ, ཐ.

The analogy between the (and ʎ is not so great in this alphabet as in what we have imagined to be its successor, in which the essential part of the *t*, (ɪ) is the (placed downwards, ⌒. In the same manner the connection of the labials, *p* and *b*, is more visible in the old Ceylonese, the Canoují, and even the Tibetan alphabets; the *b* ཕ, being merely the *p* པ, closed at the top: and in square Pálí ⌊⌋ and □.

Thus when we come to examine the matter critically, we are insensibly led to the reduction of the written characters to a comparatively small number of elements, as +, ɗ, (, ɾ, ⊥, ⊔, ȣ, |, ȣ and ⌒; besides the vowels ȣ, ⊳, ⌊. Or perhaps, in lieu of this arrangement, it may be preferable to adopt one element as representative of each of the seven classes of letters. We shall thus come to the very position long ago advanced by JAMBULUS the traveller.

JAMBULUS was antecedent, says Dr. VINCENT, to DIODÔRUS; DIODÔRUS was contemporary with AUGUSTUS. He made, or pretended to have made, a voyage to *Ceylon*, and to have lived there seven years. Nine facts mentioned by him as characteristic of the people of that country, though doubted much in former days, have been confirmed by later experience: a tenth fact the learned author of the *Periplus* was obliged to leave for future inquiry,—namely, "whether the particulars of the alphabet of *Ceylon* may not have some *allusion to truth*: for he says, 'the characters are originally only seven, but by four varying forms or combinations they become twenty-eight†.'"

It would be difficult to describe the conditions of the Indian alphabetical system more accurately than JAMBULUS has done in this short summary, which proves to be not only true in the general sense, of the classification of the letters, but exact as to the origin and forma-

* It is worth observation that the dental *d* of the inscriptions corresponds in form to the modern cerebral, and vice versâ.

† VINCENT'S *Periplus* of the *Erythrean* Sea.

tion of the symbols. As regards the discussion of the edict of DEVÁNAMPIYATISSA, the testimony of JAMBULUS is invaluable, because it proves that written characters,—our written characters, were then in use, (notwithstanding the Buddhist *books* were not made up till two centuries later:) and it establishes the credit of a much vituperated individual, who has been so lightly spoken of, that WILFORD endeavours to identify him with Sindbad the sailor and other equally marvellous travellers!

III.—*Notice of a Colossal Alto-Relievo, known by the name of Mata Kooñr, situated near Kussía Tannah, in Pergunnah Sidowa, Eastern Division of Gorakhpur District. By* D. LISTON, *Esq.*

Should a traveller happen to encamp at *Kussía*, a village situated about five kos from the *Chapra* boundary in the *Gorakhpur* district and on the road joining the two stations, it may so happen that his eye may alight on a pyramidal-looking mound of bricks about half a mile S. W. of the *serai*, over which spreads a magnificent banyan tree. Should he be of an inquisitive turn, his natural inquiries will be, what is it, and who has the fame of being its builder? He will be informed that it once belonged to *Mata Kooñr**; a somewhat less ruined brick pyramid with other brick mounds, about three quarters of a mile to the west of the object that first caught his observation, will probably be pointed out as *Mata Kooñr's* fort; and if it should be observed that our traveller's curiosity is thus excited, he will be told that *Mata Kooñr* himself lies petrified at but a short distance from his former place of abode. A walk of about a couple of furlongs from the ruins, called the fort, will bring our traveller to the side of a colossal *alto-relievo* of very respectable execution, surrounded by much carved work, many of the figures of which are well designed and cut, though others of them are of an exaggerated and outré character; but the features of almost all the images, as well as those of the principal idol, he will find have been destroyed with an unsparing hand, and with a care worthy of a better object.

Not only have the countenances of the figures been defaced, but an inscription, of which I send you the remaining lines as correctly as I can copy them, seems at the same time to have been erased, or ground out, the bigotry which prompted the one deed having doubtless also instigated to the commission of the other more irreparable and lamentable outrage.

* *Mrita Kumára*, the dead kumára (god of war).—ED.

The inscription, of which No. 1 forms the remaining portion of the two first and only lines left, seems to have occupied the whole of what I may denominate the shield, if we consider the surrounding carving as emblazonry, which it much resembles. Some additional writing has also existed on each side of this scroll or shield on a sort of cornice, but that on the left hand of the figure has been so completely obliterated that we can only now venture to assert that there has been writing. Of the remains on the other side the letters given in No. 2 may be considered as a careful attempt at a copy.

Mata Kooñr is an object of worship in this vicinity, and that his fame extends into neighbouring districts I had a proof in a pilgrim from *Bettiah* pouring a vial of *gangotrí* water on his sacred head whilst I was engaged with the sketch, of which I enclose a copy. The head, too, bears marks of being periodically anointed by a serving brahmin with *ghee*.

The enclosed sketch is to be considered as a plan of the design, and was taken from actual measurement. It struck me as rather remarkable in taking these measurements, that the results were generally in complete inches and almost never in fractions of that unit.

The countenance is that of a young man: the chin well turned, the forehead out of proportion, large. The appearance of the head seems to have been given by the hair having been twisted into pyramidal spirals.

Mata Kooñr is supposed to be a divinity of considerable power. Some years ago a *lohar* cut a piece from his left arm for the purpose of making a whet-stone; which sacrilege occasioned the death of himself and entire family—it is said by disease.

Tradition relates that *Mata Kooñr* on the arrival of a Musulman army to attack his fort, feeling himself unable to cope with the force arrayed against him, caused his family and dependants to descend into a well, and he himself having become a stone, lay down on the mouth of it in order to conceal it from his enemy, and to ensure that no disgrace should befal the objects of his affection. A few years ago a gentleman, (name not now remembered,) caused the stone to be removed from its site in order to ascertain whether it covered a well or no, but none was found: the stone or pieces (for the stone has split from end to end nearly in the middle) were not put back in their original position;—a dry season followed, and the cultivators of the neighbouring villages deeming that this was occasioned by the wrath of *Mata Kooñr*, came in a body and laid him again in the position which he had been known to occupy for many preceding generations.

The stone is apparently a black clay-slate.

I may mention that the appearance of the petals of the flower on the sole of the fragment of the left foot (for one foot and one hand are mutilated) would almost induce a belief that the statue was not quite finished when subjected to the ruthless hand of the destroyer. The other parts of the sculpture give an idea of its having been completed and finished with much care. The two figures of the eight-armed goddess in particular seem to me very well designed and executed.

The group outside what may be termed the frame of the principal figure consists of two stout male personages having each at his left hand a figure of the same sex, but of not more than half the height. The form next *Mata Kooñr* seems of more than Herculean proportions, and has apparently a flame or a glory about his head. His left hand rests on the head of a goat, I think, without horns and with pendent ears. The less robust figure has a disc with eight petals in each of his hands, which are held up so that the discs appear over his shoulders. He seems dressed in short drawers and short boots, whilst the apparel of his stouter companion more resembles that usually worn in the country.

The three aërial figures waving necklaces (?) over the eight-armed goddess, occupy rather more space on the stone than they appear to do in the sketch.

The waved line in the cornice over the head of *Mata Kooñr* is in the original an ornamental carving.

[Note.—We have delayed the publication of this notice, with the intention of lithographing the sketch; but although sufficient to shew that the image is one of Buddha, surrounded with the smaller compartments descriptive of various acts of his life, surmounted also above by angels and gods, and below supported by the *sinha* and elephant, it is not distinct enough for the pencil. The inscriptions also are far too much abraded to be legible—but they probably contain nothing more than the ordinary couplet. The Buddhist monument to which the image belonged was probably connected with the *lát* in the same district described by Mr. Hodgson in the Journal of the Asiatic Society, vol. III. page 482. The name of that lát situated between the town of *Bettiah* and the *Gandak* is *Mathia*, evidently the patronymic of *Mata* or *Matha*; *Kooñr*, or *Kunwar*, is a corruption of *Kumára*, the youthful, or the god of war:—or it may be derived from his adventure in the well, *kuñwa*. *Mata Kumára* might also be interpreted, 'the defunct Kumára," but in any case the vulgar appellation has nothing to do with the original intention of the image.—Ed.]

IV.—*Translation of one of the Granthas, or sacred books, of the Dadupanthi Sect. By Lieut.* G. R. SIDDONS, *1st Light Cav., second in command 3rd Local Horse, Neemuch.*

We cannot preface Lieut. SIDDON'S specimen of the contents of the *Dadupanthi* Manual better than by extracting Professor WILSON'S account of this curious sect of anti-idolatrists, from the sixteenth volume of the Asiatic Researches. Dr. WILSON had intended to have given a translation of a few passages, but his manuscript was unfortunately mislaid. His notice of the sect was chiefly obtained from Lieut.-Col. SMITH, and partly from verbal information at *Benares* where the elder branch of the same dissenters, the Kabírpanthis, have a principal establishment. Lieut. SIDDONS has enjoyed the advantage of collecting his materials at the head-quarters of the sect.

"The *Dadupanthi* is one of the indirect ramifications of the *Rámánandi* stock, and is always included amongst the Vishnava schisms: its founder is said to have been a pupil of one of the *Kabirpanthi* teachers, and to be the fifth in descent from RÁMÁNAND; viz. 1, *Kabír;* 2, *Kamál;* 3, *Jamál;* 4, *Bimal;* 5, *Buddhan;* 6, *Dadu.* The worship is addressed to RÁMA, but it is restricted to the *japa*, or repetition of his name, and the RÁMA intended is the deity as negatively described in the *Vedánta* theology: temples and images are prohibited.

"DADU was a cotton-cleaner by profession: he was born at *Ahmedabad*, but in his twelfth year removed to *Sambher* in *Ajmer:* he thence travelled to *Kalyánpur*, and next removed to *Naraina*, in his thirty-seventh year, a place four kos from *Sambher*, and twenty from *Jaypur*. When here he was admonished, by a voice from heaven, to addict himself to a religious life, and he accordingly retired to *Baherana* mountain, five kos from *Naraina;* where after some time he disappeared, and no traces of him could be found. His followers believed he was absorbed into the deity. If the list of his religious descent be accurate, he flourished about the year 1600, at the end of AKBER'S reign, or in the beginning of that of JEHANGIR. The followers of DADU wear no peculiar frontal mark nor *málá*, but carry a rosary, and are further distinguished by a peculiar sort of cap,—a round white cap according to some, but according to others one with four corners, and a flap hanging down behind; which it is essential that each man should manufacture for himself.

"The *Dadupanthis* are of three classes: the *Viraktas*, who are religious characters, who go bare-headed, and have but one garment and one water-pot. The *Nágas* who carry arms, which they are willing to exercise for hire, and amongst the Hindu princes they have been

considered as good soldiers. The third class is that of the *Bister-dhárís*, who follow the occupations of ordinary life. A farther sub-division exists in this sect, and the chief branches again form fifty-two divisions, or *thambas*, the peculiarities of which have not been ascertained. The *Dadupanthis* burn their dead at dawn, but their religious members not unfrequently enjoin that their bodies after death shall be thrown into some field or some wilderness, to be devoured by the beasts and birds of prey; as they say, that in a funeral pile insect life is apt to be destroyed.

"The *Dadupanthis* are said to be very numerous in *Márwár* and *Ajmer*: of the *Nága* class alone the rája of *Jaypur* is reported to entertain as soldiers more than 10,000. The chief place of worship is at *Naraina*, where the bed of DADU, and the collection of the texts of the sect are preserved and worshipped. A small building on the hill marks the place of his disappearance. A *mèla* or fair is held annually from the day of new moon to that of full moon in Phálgun, (February-March,) at *Naraina*. The tenets of the sect are contained in several *Bhásha* works, in which it is said a vast number of passages from the *Kabír* writings are inserted, and the general character of which is certainly of a similar nature. The *Dadupanthis* maintain a friendly intercourse with the followers of KABI'R and are frequent visitors at the *Chaura*, (at *Benares*)"

विश्वासका अङ्ग।

दादू सहजै होइगा जेकुछदृचियाराम। काहेकौं कलपैमरै दुषीहोइव काम। १।
सांईकियासुख्है रह्या जेकुछकरै सुहोइ। करनाकरैसहोतहै काहे कलपैकोइ। २।
दादाकहैजेतैकियासुख्हैरह्या जेतूं करै सुहोइ। करणकरांवणएकतूं दूजानां हीं कोइ। ३।

सोई हमारा सांइयां जेसबकापूर्णहार। दादूजीवनमरणका जाकैहाथिविचार। ४।
दादूब्रह्मंडभवनपातालमध्य आदिअनतसबदृष्टि। सिरजिसवनिकौंदतहै सोई हमारा दृष्ट। ५।

करणहारकरतापुरष हमकै कैसी चीत। सबकाछकीकरतहै सोदादूकामीत। ६।
दादू मनसा वाचा कर्मना। साहिबकावेसास। सेवकसिरजनहारका करै कांनको आस। ७।

आरतदूरमनआवैजीवकौं चलकिया सब दादू। दादूमारममिष्टरका विरलाबूझै कोइ। ८।

दादू उदिमऔगुणकोनहीं जेकरिजाणैकोइ। उदिमभैंयानन्दहै जसांईसेतीहाइ ९
पूरणहारापूरसी जौचितरहसीठांउं। अन्तरथैंहरिउमगसीमक सनिरन्तरराम। १०।
पूरिकपूरापामिहै नांहीदूरीनवार। सबजानतहैवावरे देवेकौडसियार। ११।
दादूचिन्तारांमकौ संग्रथसबजानैं। दादूरांमसम्भालिये चिन्ताजिनिआनैं। १२।
दादूचिन्ताकियांकुछ नहीं चिन्ताजीवकौषाइ। ह्वणांथासोह्वैरह्याजांनाहैसोजाइ।१३
दादूजिनिपछचायाप्राणाकौ उदरउर्हमुषिधीर। जठरअगनिमैंराषियाकोमलकाया शरीर। १४।
सोसंग्रथसंगो संगिरहै विकटघाटयटभोर। सोसांईसूंगहगहींजिनिभूलैमनवीर। १५।
गाबंदकेगुणचीतिकरि नैनबैनपगसोस। जिनिमुषदिया कांनकरप्राणनाथजगदीश।
तनमनसौंजसवांरिसब रापेबिसवावोस। सोसाहिबसुमरैनहीं दादूमांनिहदीस।१७
दादूसो साहिबजिनिबीसरै जिनिघटदीयाजीव। गर्भबासमैंराषिया पालैपोषैपीव।
हिरदैरामसम्भालिल मनराषैवेसास। दादूसंग्रथसांईयां सबकोपुरैआस। १९।
दादूराजिकरिजकलियेंषडा देवैहाथोंहाथ। पूरिकपूरापासिहैंसदा हमारे साथ।
दादूसांईसबनिकौ सेवगहैसुषदेइ। अयाबूढमतिजीवकी नौभीनाव न लेइ। २१।
दादूसिरजनहारासबनिका ऐसाहै संग्रथ। सोईसेवगन्हैरह्याजहांसकलपसारैहाथ।
२२।
धनिधनिसाहिबतूंबड़ा कौनबनूपमरीत। सकललोकसिरिसांईयां न्हैकरिरह्याच
तीत। २३।
दादूलंबलहारीसुरतिकी सबकीकरैसम्भाल। कीडीकुञ्जरपलकमैं करताहैप्रतिपाल।
दादू भाजनभोजनसहजमैं संईयांदेइ मुलेइ। तातैंअधिकाऔरकुछ सोतूंकांइ
करइ। २५।
दादूटूकासहजका मलीषीजनषाइ। सतकभोजनगुरमुष काहेकलपैजाइ। २६।
परमसुरकेभावका एककणकापाइ। दादूजेतापापथा धर्मकर्म सबजाई। २७।
दादूकौनपकावै कौनपीसैं। अहंतहांसीधाहोदांसै। २८।
दादूभाडादेहका नेतासहजिविचार। जेताहरिविचिअन्तरानेतासबैनिवार। २९।
दादूजसदत्तरांमका हमसेवैंप्रमाद। संसारकासमझैनहीं अविगतभावअगाध। ३०।
दादूजकुछपुसीष्दादूकी होवेगासोइ। पचिपचिकोईजिनिमरै सुणिजिजैलोई। ३१।
दादूकूटषुदाईकहींकोनाहीं फिरिहैपिरथीसारी। दूजादहयिदूरिकरिवैरे साधु
सबविचारी। ३२।
दादूजिनांरांमकहीं फिरिहैपिरथीसारी। दूजादहनिदूरिकरिवैरै सुनिषहसाधु
सन्द्रमा। ३३।

दादूसिद्धकसबूरीसाचगहि सावतिरासिभकीन। साहिबसौंदिललादूरङ्ग मुरदाहो इमसकीन। ३४।

दादूअणबंछ्याटूकाषातहैं मरमहिलागासंन। नांवनिरंजनलेतहैं यौंनिर्मलसाधुजंन। अणबंछ्याआगैपडै पीछै सेदू उठादू। दादूकेसिरिदोसपछ जेकुछरांमरजादू। ३६। अणबंछ्याआगैपडै षसाबिचारिषषादू। दादूफिरैनतोडतातर वरताकिनजादू। अणबंछ्योअजगैवकी राजीगममगरास। दादूसतिकरिलीजियेसोजादूकेपास। ३८। मीठेकासबमीठालागै भावैविषभरिदेदू। दादूकडुवानांकहैअमृत करिकरिले।३९। विपतिभलीहरिनांमसौं कायाकसौटो टुष। रांमबिनांकिसकांमका दादूसंपतिसुष। दादूएकविसांसबिन जियरांडांवांडोल। निकटिनिधिदुषपाईऐ चिंतामणींअमोल। ४१।

दादूबिनबेसासोजीयरा चषलनांचींटीर। निहचैनिहचलनांरहै कहूंचौरकोचौर। ४२।

दादूछ्णांथासोव्हैरह्या जिनिबांछैसुषदुष। सुषमांगैदूषआदसी पैपीयनबिसारीमुष। दादूछ्णाथासोव्हैरह्याखगैनबाछ्योधादू। नर्ककन्हेंथींनाउरी ऊवासहोमीआदू। ४४। दादूछ्णांथासोव्हैरह्या जेकुछकीयापाव। पलबधैनछिनघटै जैसीजांणींजीव। ४५। दादूछ्णांथासोव्हैरह्या चौरनहोवैआदू। लेनाथासोलेरहे औरनलीयाजादू। ४६। ज्यूरचियात्यूंहोईमा काहेकौसिरिले। साहिबउपरिराषिये देषितमासाए। ४७। ज्यूजाणैत्यूंराषियौ तुमसिरिढालीरादू। दूजाकोदेषैनहीं दादू जननजीदू। ४८। ज्यूंतुम्हभावैत्यूंषसो हमराजो उसबात। दादूकेदिनसिद्धकसैंभावैदिनकौरात। ४९। दादूकरणाहारजेकुछकिया सोबुरानकहनाजादू। सोदूसेवमसंतजन रहिवारांम रजादू। ५०।

दादूकरताहमभली करताचौरेकोदू। करताहैसोकरैगा तूंजिनिकरताहोदू। ५१। कासीनजिममहरमया कबीरभरोसैराम। सैदेहीसांईमिल्याहादूपूरेकांम। ५२। दादूराजीरांमसूं राजिकरिजकहमार। दादूउसप्रसादसौंपोष्या सबपरिवार। ५३। पंचसंतोमेंएकसौं मनमतिवालामांहि। दादूभागीभूषसब दूजा भावैनांहि। ५४। एकमेरकाढामडा कूहींभ खानजादू। भूषनभागीजीवकी दादूके नाषादू। ५५। दादूसाहिबमेरेकपडे साहिबमेराषांण। साहिबसिरकातालजै पाहिबषिष्डपरांण। दादूईश्वरजीवको नितिकरै प्रतिपाल। कंबाज्यूंपोषैसदा मतिदुषपावैबाल। ५७। सांईसतसब्दे षदे मांवभमतिवेसास। सिद्धकसबूरीपाचदे मांगैदादूदास। ५८।

विश्वासकोअङ्गसंपूर्ण।

Translation of the chapter on Faith.

1. Whatever RA'M willeth, that, without the least difficulty, shall be; why, therefore, do ye kill yourselves with grief, when grief can avail you nothing?

2. Whatsoever hath been made, GOD made. Whatsoever is to be made, God will make. Whatsoever is, GOD maketh,—then why do any of ye afflict yourselves?

3. DADU sayeth, Thou, oh GOD! art the author of all things which have been made, and from thee will originate all things which are to be made. Thou art the maker, and the cause of all things made. There is none other but thee.

4. He is my GOD, who maketh all things perfect. Meditate upon him in whose hands are life and death.

5. He is my GOD, who created heaven, earth, hell, and the intermediate space; who is the beginning and end of all creation; and who provideth for all.

6. I believe that GOD made man, and that he maketh every thing. He is my friend.

7. Let faith in GOD characterize all your thoughts, words, and actions. He who serveth GOD, places confidence in nothing else.

8. If the remembrance of GOD be in your hearts, ye will be able to accomplish things which are impracticable. But those who seek the paths of GOD are few!

9. He who understandeth how to render his calling sinless, shall be happy in that calling, provided he be with GOD.

10. If he that perfecteth mankind, occupy a place in your hearts, you will experience his happiness inwardly. RA'M is in every thing; RA'M is eternal.

11. Oh foolish one! GOD is not far from you. He is near you. You are ignorant, but he knoweth every thing, and is careful in bestowing.

12. Consideration and power belong to GOD, who is omniscient. Strive to preserve GOD, and give heed to nothing else.

13. Care can avail nothing; it devoureth life: for those things have existed which were ordained, those things shall happen which GOD shall direct.

14. He who causeth the production of all living things, giveth to their mouths milk, whilst yet in the stomach. They are placed amidst the fires of the belly: nevertheless they remain unscorched.

15. Oh forget not, my brother, that GOD's power is always with you. There is a formidable pass within you, and crowds of evil passions flock to it: therefore comprehend GOD.

16. Commend the qualities which GOD possesseth. He gave you eyes, speech, head, feet, mouth, ears, and hands. He is the lord of life and of the world.

17. Ye forget God, who was indefatigable in forming every thing, and who keepeth every thing in order; ye destroy his doctrines. Remember God, for he endued your body with life: remember that beloved one, who placed you in the womb, reared and nourished you.

18. Preserve God in your hearts, and put faith into your minds, so that by God's power your expectations may be realized.

19. He taketh food and employment, and distributeth them. God is near; he is always with me.

20. In order that he may diffuse happiness, God becometh subservient to all; and although the knowledge of this is in the hearts of the foolish, yet will they not praise his name.

21. Although the people every where stretch out their hands to God; although his power is so extensive, yet is he sometimes subservient to all.

22. Oh God, thou art as it were exceeding riches; thy regulations are without compare, thou art the chief of every world, yet remainest invisible.

23. Dadu sayeth, I will become the sacrifice of the Godhead; of him who supporteth every thing; of him who is able, in one moment, to rear every description of animal, from a worm even to an elephant.

24. Take such food and raiment as it may please God to provide you with. You require naught besides.

25. Those men who are contented, eat of the morsel which is from God. Oh disciple! why do you wish for other food, which resembles carrion?

26. He that partaketh of but one grain of the love of God, shall be released from the sinfulness of all his doubts and actions. Who need cook, or who need grind? Wherever ye cast your eyes, ye may see provisions.

27. Meditate on the nature of your bodies, which resemble earthen vessels; and put every thing away from them, which is not allied to God.

28. Dadu sayeth, I take for my spiritual food, the water and the leaf of Ra'm. For the world I care not, but God's love is unfathomable.

29. Whatever is the will of God, will assuredly happen; therefore do not destroy yourselves by anxiety, but listen.

30. What hope can those have elsewhere, even if they wandered over the whole earth, who abandon God? oh foolish one! righteous men who have meditated on this subject, advise you to abandon all things but God, since all other things are affliction.

31. It will be impossible for you to profit any thing, if you are not with God, even if you were to wander from country to country; therefore, oh ignorant, abandon all other things, for they are affliction, and listen to the voice of the holy.

32. Accept with patience the offering of truth, believing it to be true; fix your heart on God, and be humble as though you were dead.

33. He who meditateth on the wisdom which is concealed, eateth his morsel and is without desires. The holy praise his name, who hath no illusion.

34. Have no desires, but accept what circumstances may bring before you; because whatever GOD pleaseth to direct, can never be wrong.

35. Have no desires, but eat in faith and with meditation whatever chances to fall in your way. Go not about, tearing from the tree, which is invisible.

36. Have no desires, but take the food which chances to fall in your way, believing it to be correct, because it cometh from GOD; as much as if it were a mouthful of atmosphere.

37. All things are exceeding sweet to those who love GOD; they would never style them bitter, even if filled with poison; on the contrary, they would accept them, as if they were ambrosia.

38. Adversity is good, if on account of GOD; but it is useless to pain the body. Without GOD, the comforts of wealth are unprofitable.

39. He that believeth not in the one GOD, hath an unsettled mind; he will be in sorrow, though in the possession of riches: but GOD is without price.

40. The mind which hath not faith, is fickle and unsettled, because, not being fixed by any certainty, it changeth from one thing to another.

41. Whatever is to be, will be: therefore long not for grief nor for joy, because by seeking the one, you may find the other. Forget not to praise GOD.

42. Whatever is to be, will be: therefore neither wish for heaven nor be apprehensive on account of hell. Whatever was ordained, is.

43. Whatever is to be, will be; and that which GOD hath ordained can neither be augmented nor decreased. Let your minds understand this.

44. Whatever is to be, will be; and nothing else can happen. Accept that which is proper for you to receive, but nothing else.

45. Whatever GOD ordereth, shall happen, so why do ye vex yourselves? Consider GOD as supreme over all; he is the sight for you to behold.

46. DADU sayeth, Do unto me oh GOD! as thou thinkest best—I am obedient to thee. My disciples! behold no other GOD; go no where but to him.

47. I am satisfied of this, that your happiness will be in proportion to your devotion. The heart of DADU worshippeth GOD night and day.

48. Condemn nothing which the creator hath made. Those are his holy servants who are satisfied with them.

49. We are not creators—the Creator is a distinct being; he can make whatever he desireth, but we can make nothing.

50. KUBEERA left *Benares* and went to *Mughor* in search of GOD. RA'M met him without concealment, and his object was accomplished.

51. DADU sayeth, My earnings are GOD He is my food and my supporter; by his spiritual sustenance, have all my members been nourished.

52. The five elements of my existence are contented with one food: my mind is intoxicated; hunger leaveth him who worshippeth no other but GOD.

53. God is my clothing and my dwelling. He is my ruler, my body, and my soul.

54. God ever fostereth his creatures; even as a mother serveth her offspring, and keepeth it from harm.

55. Oh God, thou who art the truth, grant me contentment, love, devotion, and faith. Thy servant Dadu prayeth for true patience, and that he may be devoted to thee.

V.—*Notice of new Sites of Fossil deposits in the Nerbudda Valley.* By *Dr.* G. G. Spilsbury. *Pl. XXX.*

[In a letter to the Sec., see Proceedings As. Soc. for May, p. 321.]

The last presentation I made to the museum was part of the os innominatum of an elephant, which, judging by the size of the sockets, was supposed to be of larger dimensions than the animal whose bones were delineated in your August No. for 1834. The specimen was picked up on the hill close to *Jabalpur*, on the site first brought to notice by Captain Sleeman, and whose discovery has been the parent of the whole of my researches. This specimen was forwarded as being the first that appeared to me of definite form sufficient to identify the animal to which it belonged. Since this I have been over the hill several times, but with the exception of one vertebra of the same or similar sized animal, I have not been able to add more specimens of sufficient size or determinate form to my collection; though I doubt not the hill is most rich in fossil remains from the quantity of fragments of trees and bones strewed about. From a note of mine in December last you were made aware that I was following up my investigations at *Sagauni* on the *Omar Naddhi*. These have now led to the discovery of three new sites for the knowledge of which we are solely indebted to Major Ouseley, the principal Assistant of the district, whose zeal in the prosecution of these most interesting discoveries, and kindness in aiding and facilitating their conveyance to me will, I have no doubt, be fully appreciated by the Society when the specimens are presented, and which I trust will be before the termination of March. I shall now proceed to give some description of the present dispatch, consigned to my friend Dr. Row's care, who will I know have much pleasure in forwarding them to you.

Seven of the specimens are from my old site of *Sagauni*, and as I before forwarded two femurs, the present must evidently have belonged to another animal of the same species. They consist of a sacrum, part of the os innominatum containing the socket, part of the os pubis,

the symphisis being very distinct*, a femur (figs. 1, 2, see note) in two pieces and a tibia (figs. 3, 4) in as many. These constitute the packages from *Sagauni*, and you will doubtless immediately recognize the same formation and matrix as those first sent. Circumstances not allowing of my visiting the place in person, I requested Major OUSELEY, who was at that time at *Narsinghpur*, to visit the place and have a shaft cut from top to bottom. While so employed, being accompanied by numerous *patels* of the neighbourhood, one of them informed him that about two kos off, a giant's head was projecting from the bank near his village; and on visiting the place the splendid upper jaw, that is now presented†, was excavated and sent in. This also led to the discovery of the fossil Buffalo-head, (for I presume from the size and setting on of the horns, that there will be no doubt as to what animal it belongs,) together with four other fossil remains of animals which I shall leave to the cognoscent to class. I have still two specimens to forward, one a shoulder from *Sagauni*, the other a nearly complete elephant's head with exception of the lower jaw. This last was the result of native intelligence, Major OUSELEY being informed that close to *Rewanagar* was a giant's head, and that the place or ravine in which it was deposited obtained the name of the *Dona's khoh* from this circumstance. This, however, with the shoulder must await another opportunity, as they do not weigh less than five maunds, and the fragments now brought to your notice are not less than ten. Thus from Captain SLEEMAN's first discovery of a fossil deposit near *Jabalpur* valley, and a slight notice of that fact in your Journal, eleven sites (including *Jabalpur* and *Hoshingabád*) in the valley of the *Nerbudda* have been brought to the notice of those interested in geological pursuits, and with the valuable aid now afforded by my new coadjutor Major OUSELEY, I trust to add to the number.

In conclusion I beg to send a sketch, shewing the locale of the new sites.

NOTE.—The dimensions of the huge fossil humerus and cubitus, represented in the plate correspond so nearly with those of the femur formerly extracted by Dr. SPILSBURY from the same spot *Sagauni*, that we may safely allot them to the same animal, an elephant of certainly more than fifteen feet high: and indeed our museum will soon be able to put the animal together from the ponderous masses

* These fragments put together are represented in Plate XXX. figs. 5, 6.—ED.

† A fine fossil, ferruginized—of a smaller size than the *Sagauni* elephant. —ED.

Nerbudda Fossil Elephant

fig. 1.

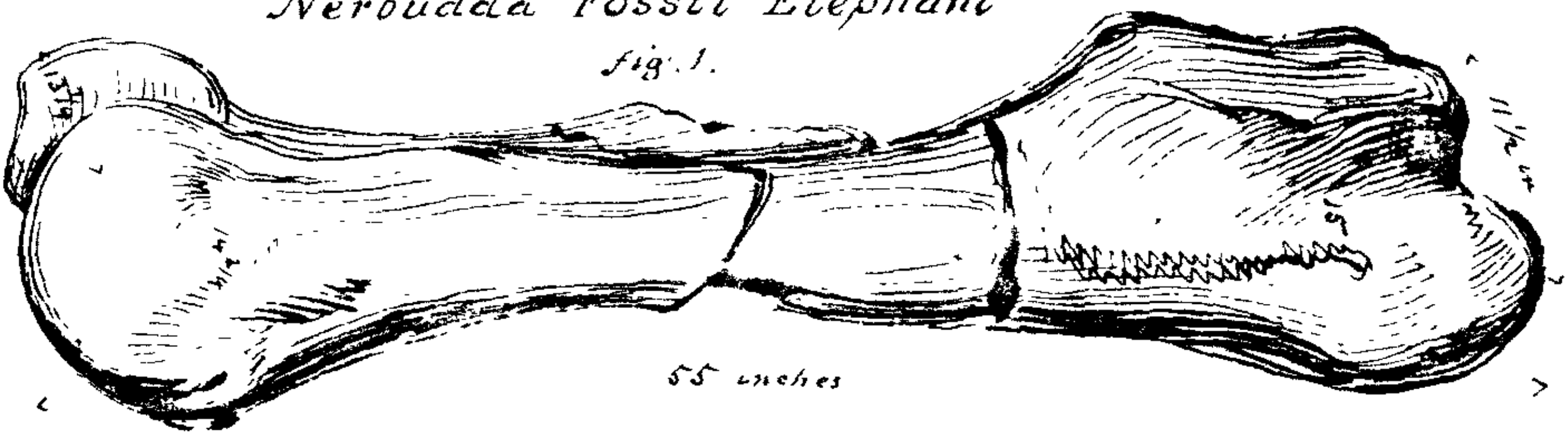


fig 2

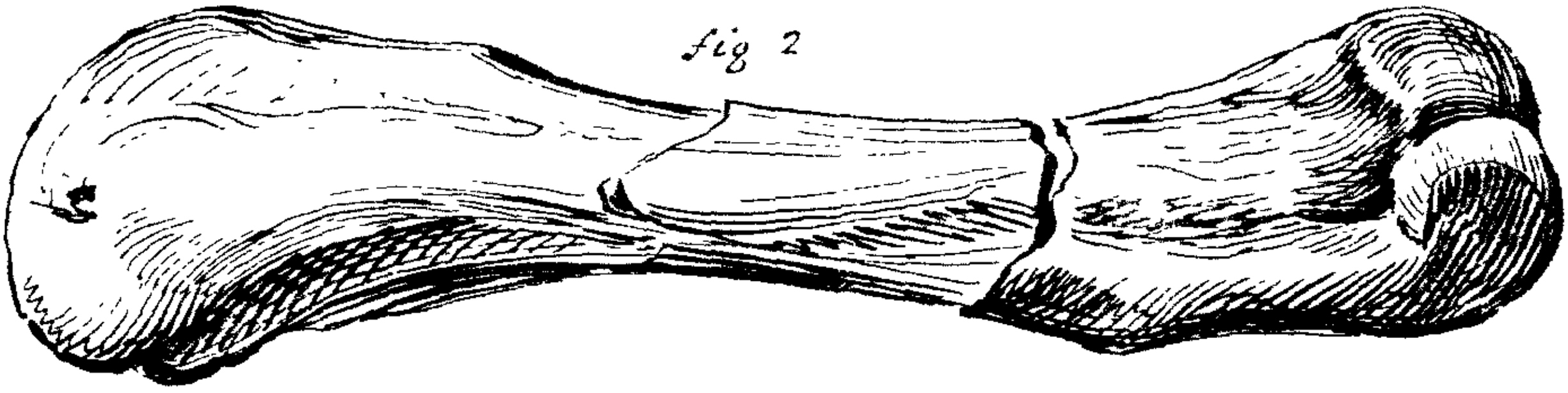


fig. 3

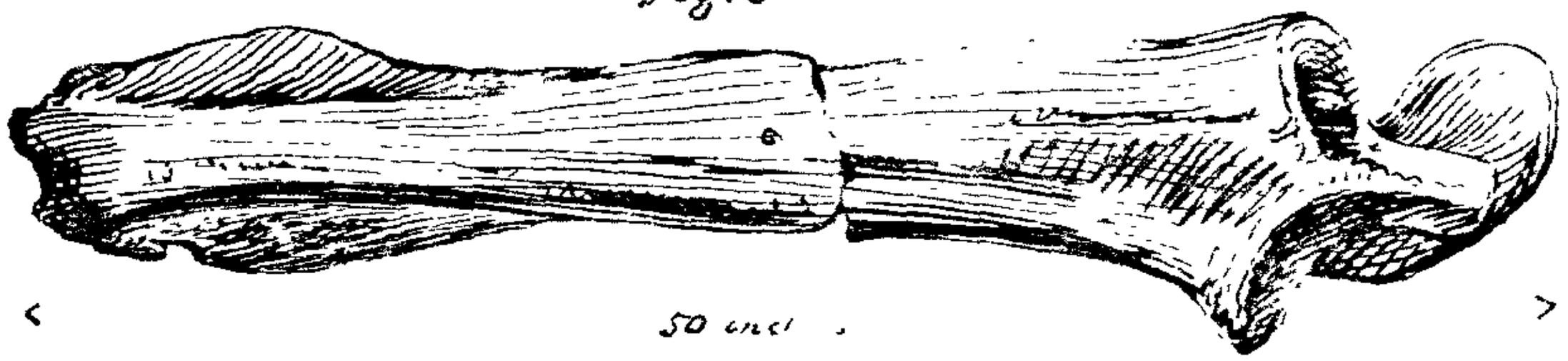


fig. 4.

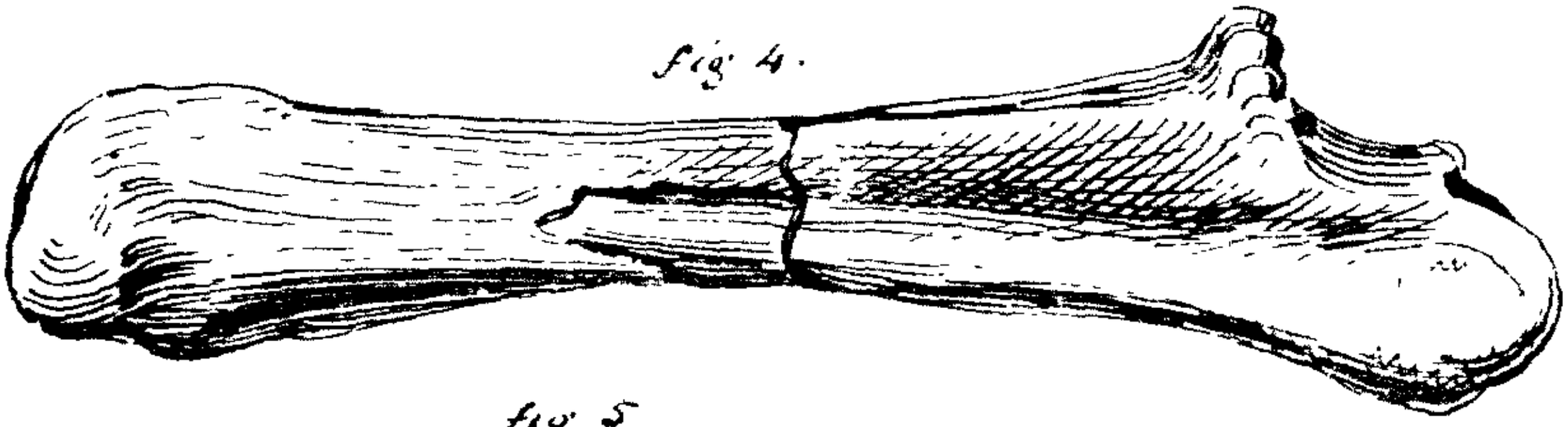


fig. 5

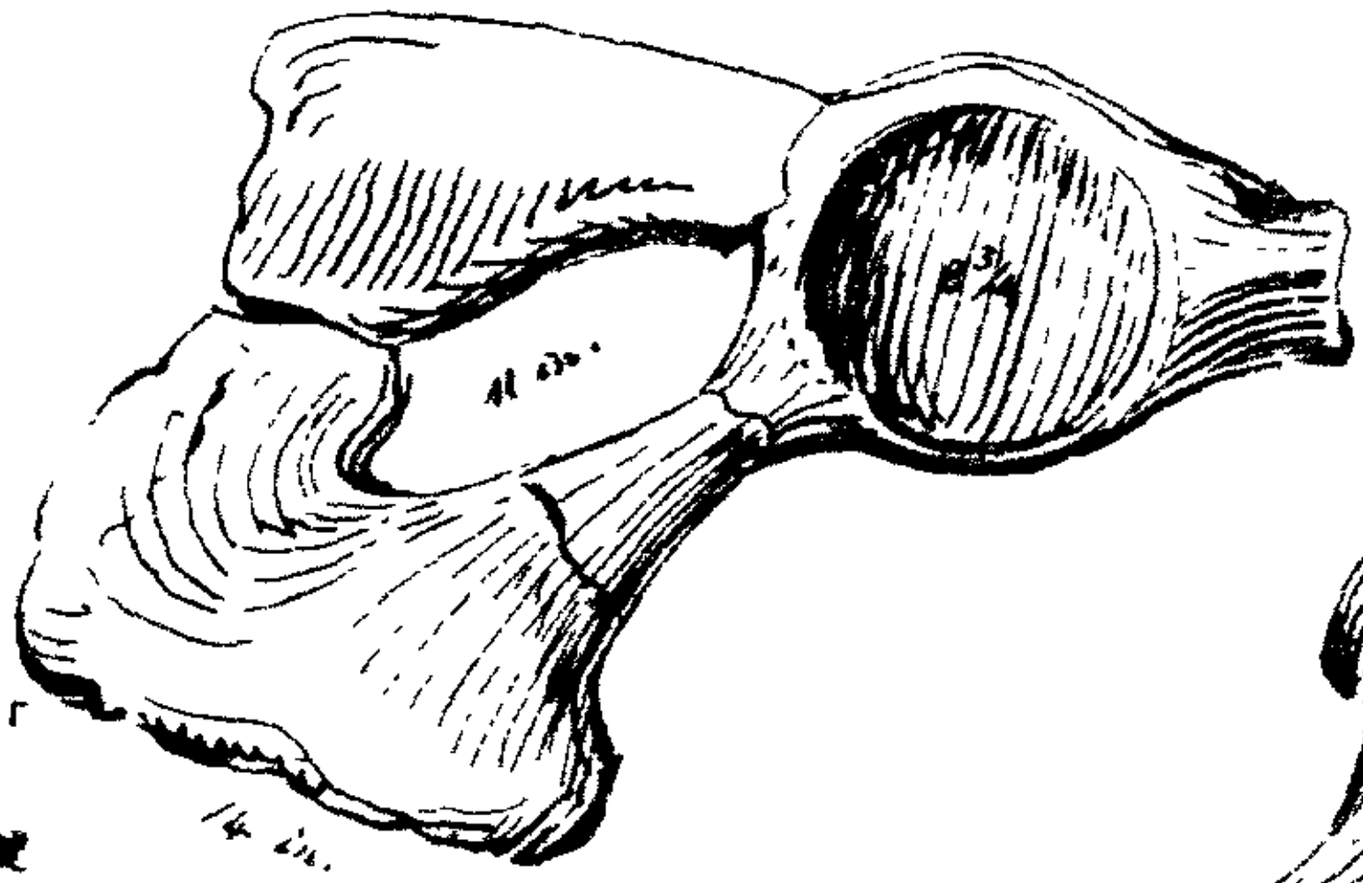


fig. 6

J. Rinsep ses et Lith.

Dr. S. has, at great trouble and expense, conveyed across country from the *Nerbudda* to the *Ganges* for us. In the sketch of localities joined to his note, it becomes evident that the whole alluvium contains fossil remains; and we may confidently leave its exploration to the Doctor and his coadjutor Major Ouseley. We might expatiate upon the gold medals awarded by the London Geological Society to Messrs. Cautley and Falconer* as a stimulus to our discoverers, but although it must be an encouragement to all to find their labors thus appreciated at home, we should blush to put such rewards in the scale against, or with, the disinterested love of science which has done so much alone. We would suggest to Dr.S. not to confine himself to gigantic specimens, but particularly to select from the mass of fragments, teeth of all sorts: hitherto we have only had the horse, the elephant, and the buffalo from *Jabalpur*, but doubtless there are as many other animals associated with these as at *Perim* and elsewhere. We have not time at present to lithograph the buffalo (an incontestable one it is) but we reserve it with the less regret because we are expecting a similar specimen from Mr. Dawe,—when all the heads can be arranged together for comparison.—Ed.

VI.—*New species of Scolopacidæ, Indian Snipes.*

By B. H. Hodgson, *Esq.*

In No. 32 of the *Gleanings in Science*, (the precursor of your Journal) for August, 1831, I gave a full and careful account of the Woodcock and of the several Snipes of *Nepál*. But as no technical names and characters were then affixed to these birds†, I may as well attempt to supply the deficiency for the benefit of *local inquirers*, who, I suspect, are hardly sufficiently alive to that legerdemain of the closet-naturalist, whereby they are cheated of the whole merit of their labours by him who does no more than annex a few words of doggrel Latin to the numerous facts painfully elaborated by costly and continuous attention. How long assiduous local research is to be deliberately deprived of those aids of library and museum which it ought to be the chief duty of learned Societies at home to furnish, I know not. But the candid will, in the meanwhile, make all

* We hope these medals will not be so tardy of arrival as those voted to Captains Burnes and Conolly by the Paris Geographical Society which have not yet made their appearance.—Ed.

† Those to whom it went, best know what is become of the paper I sent home, *with* these names and characters affixed.

allowances for the necessary errors cleaving to attempts at technical Zoology, in the want of such aids. Whilst the face of our land is darkened with skin-hunters, deputed by learned Societies to incumber science with ill-ascertained species, no English zoological association has a single travelling naturalist* in India; nor has one such body yet sought to *invigorate local research*, numerous as now are the gentlemen in India with opportunities and inclination for observation such as need but the appropriate aid of those bodies to render the investigations of these gentlemen truly efficient towards all the higher ends which the Societies in question are constituted to forward!

GRALLATORES.

SCOLOPACIDÆ.

Genus SCOLOPAX, Auctorum.

Species, new? *Indicus*, nobis.

Structure typical: aspect of the European type: size less, 14 inches long by 24 between the wings, and 12 oz in weight: bill 3 inches: tail $3\frac{1}{2}$: wings about $1\frac{1}{4}$ inch less than the tail: 1st quill longest: tertials about 1 inch less. Tarsus $1\frac{3}{4}$; central toe $1\frac{1}{2}$, hind $\frac{1}{2}$†. Tail 12, soft, uniform.

Remark. Found everywhere, in the higher mountains of India. Colored like the European type, but asserted by competent judges to be less in size. The size and proportions given will determine this point. If *both* differ, the species must be distinct, and will form an interesting instance of geographical equivalency without specific identity—of which probably there are very many yet to be noted, especially among the *Raptores*, the waders, and the swimmers—migrating birds which have, it is true, a wide range, but very apparently (according to my experience), a *limited* one.

Genus GALLINAGO, Auctorum.

Species, new: *Nemoricola*, nobis.

Large dark wood-haunting snipe, with full soft bowed wings: shortish tail of 16 to 18 feathers, whereof the 8 or 10 laterals are somewhat narrowed and hardened: large blue legs and feet, and belly

* The French, who are far quicker-witted than we Beotian islanders, have had two such agents in India ever since I came to it. But the travelling naturalist is in no condition to compete with the fixed local student, if the latter receive the obvious helps from home. For many years past we have had great and wealthy Zoological Societies in London, which, however, have not yet found out that the phænomena of animate nature must be observed where they exist!

† My method of measuring the tarsus and digits has been explained in the Indian Journal of Science, No. VIII. for November 1836.

entirely barred: 12½ inches long by 18 between the wings: bill 2⅝, tail 2½: tarsus 1¾: central toe 1 1/16: hind 7/16: weight 7 oz.

Remarks. This interesting species forms by its size, its manners, and some points of its structure, a link between the genera *Scolopax* and *Gallinago*, but deviates from both towards *Rhynchæa*, by the feebleness of its soft, bowed and subgradated wings, which have the 2nd quill longest. I have set it down in my note book, as the type of a new genus or subgenus, under the style of *Nemoricola Nipalensis*, but I forbear, for the present, from so naming it. Its general structure is that of a snipe, but the bill is a woodcock's, and the legs and feet are larger than in *Gallinago*. It is shy, non-gregarious, avoids the open cultivated country, and is only found in the haunts of the woodcock, with this difference in its manners, as compared with those of *Scolopax*, that it is averse from the *interior* of woods. The wings are usually from ¾ to 1 inch less than the tail, and the prime and tertial quills are equal. The tarsi differ from those of the common snipe in that the scales, posteally, are broken on the mesial line, whereas they are entire in that bird.

2nd Species, new: *Solitaria*, nobis.

Large, pale, luteous-legged snipe, with small legs and feet, and tail consisting of 20 plumes, whereof the 10 laterals are hardened and narrow: 12½ inches long by 20 in expanse: bill 2¾: tail 3⅛: tarsus 1 7/16: central toe 1 3/16: hind 5/16: weight 6½ oz.

Remarks. The general structure of this bird is perfectly typical, *(Gallinago)*, but it has shorter legs and feet than the ordinary snipe, from which it further differs by the division of the tarsal scales, on the posteal aspect. This is a point of affinity with the last, with which our present species agrees very closely in manners; the two conducting one, without a sensible interval, from *Scolopax* to *Gallinago*. The trivial name refers to the habits of the species: but the term, in English, is usually applied by our sportsmen to the preceding bird which is found in the *Doons* and *Kaders* near the hills, whereas the present species never quits the hills. In our present subject the wing has all the strength and acumination so characteristic of most of its confamiliars. The tail also is firm and of good length. The tail usually exceeds the wings by about half an inch, the tertials being scarcely so long as the primes.

3rd Species, *Biclavus*, nobis.

Common Indian field snipe, with the lining of the wings perfectly barred, and tail of 24 to 28 feathers, of which the 16 to 20 laterals

are narrowed almost to threads, and very rigid. 11 inches long by 17 wide, and 5 oz. in weight; bill $2\frac{1}{2}$: tail $2\frac{1}{4}$: tarsus $1\frac{1}{2}$: central toe $1\frac{1}{4}$, hind $1\frac{6}{16}$.

4th Species, *Uniclavus*, nobis.

Common Indian field snipe, with the lining of the wings faintly barred, the bill long, and tail of 14 to 16 uniform plumes. $11\frac{1}{2}$ inches long by 17 wide*, and 5 ounces in weight: bill $2\frac{3}{4}$: tail $2\frac{5}{8}$: tarsus $1\frac{1}{2}$: central toe $1\frac{1}{4}$, hind $1\frac{6}{16}$.

Remarks. The two last species are the ordinary snipes of the plains and hills: their general structure and aspect are quite typical, but their size is less than that of their European analogue. The differences noted in the two species are permanent, as I have proved by the examination of numberless specimens of both sexes, and in all stages of moult. Both the bill and the tail of *Uniclavus* are conspicuously longer than those of *Biclavus*. In characterising these four species of *Gallinago*, I have chosen purposely to rely on size, proportions, and the structure of the tail—points which I have no doubt will serve to fix my species without reference to colors, in relation to which it may be observed that the uniformity of aspect (except in our *Nemoricola*, which has the woodcock bars below) is calculated only to confuse those who are referred to it for specifical differences. The expressions dark and pale, in the specific characters of *Nemoricola* and *Solitaria*, have careful reference to the average tone and intensity of color in the type of *Gallinago*.

In *Biclavus*, the wings are seldom so much as an inch short of the tail: whereas in *Uniclavus*, they are generally $1\frac{1}{4}$ at least. This is caused by the superior length of the tail in the latter: for the wings of both are of equal size, and 5 inches long from the bend of the shoulder to the tip of the longest quill.

* The Rev. R. EVEREST, in 1825, killed a bird of this species, $12\frac{1}{2}$ inches long and 7 oz in weight!! But monsters are abnormal; and I take occasion to say that all my sizes, weights and proportions in this paper are mean maxima, deduced from numberless trials. I may add, that the sexual defferences are purposely overlooked, having been found to be inappreciably small. The females, however, are the larger; and the males, the deeper toned in color.

VII.—*Proceedings of the Asiatic Society.*

Wednesday Evening, the 5th July, 1837.

The Hon'ble Sir EDWARD RYAN, President, in the chair.

Mr. J. MUIR, C. S., proposed by Captain CAUTLEY, seconded by the Secretary, at the last meeting, was elected a Member.

The Baron SCHILLING, of *Cronstadt*, was, upon the favorable report of the Committee of Papers, elected an Honorary Member.

RUSTAMJI' COWASJI', was proposed by Baboo RA'M COMAL SEN, seconded by Sir E. RYAN.

Baboo SUTT CHURN GHOSAL, proposed by the Secretary, seconded by Mr. HARE.

Captain BOGLE, proposed by Mr. WALTERS, seconded by Captain PEMBERTON.

Read a letter from Dr. J. SWINEY, acknowledging his election as a Member.

Read the following correspondence regarding the museum, consequent upon the resolution of the last meeting.

To the Right Honorable GEORGE, Lord AUCKLAND, &c. &c. &c.
Governor General of India in Council.

MY LORD,

I have been requested by the Asiatic Society to become the organ of a respectful representation to your Lordship in Council on a topic of great importance to the interests of the Society, which was made the subject of a Resolution passed at a general meeting held on the 7th instant.

I have now accordingly the honor to submit a copy of that Resolution, and with every deference and respect to solicit for the prayer of it, the most favorable consideration of your Lordship's Government.

The Asiatic Society has been in existence for more than half a century. Founded by the illustrious Sir WILLIAM JONES, with the concurrence and support of the no less illustrious WARREN HASTINGS, it has uniformly enjoyed the countenance and protection of the high officers placed at the head of the Indian administration, many of whom have joined in its objects with more than the formal interest of nominal patrons, and have contributed individually to its records of literature, or to its collection of antiquities and of curious natural productions.

It would be quite superfluous to enumerate, in addressing the Society's official patron, the many eminent men whose names have adorned and still adorn its list of members, or to recal the services they have severally rendered to science and to literature; but it is by no means to these alone that the Institution owes its efficiency, its stability, and its reputation. Without the co-operation of the many, the talents and abstract studies of the few would have been comparatively ineffectual; and the learned world in many cases would have been deprived of the chief benefit of their studies and knowledge but for the combination which is so necessary to effect undertakings of magnitude and expence, and for the stimulus which emulation, and publicity, and a common interest never fail to excite.

Since its foundation the Asiatic Society has expended more than three lakhs of rupees upon the prosecution and publication of its Researches in the languages, the philosophy, the history, the geography, physical, and statistical of India; and there is no branch of useful knowledge connected with this country that has not received illustration through the judicious employment of its funds.

On one or two occasions the Society has received handsome donations from individuals, but it has never yet solicited or received public aid from the Government of the country. In venturing therefore to propose a measure for which there was no precedent in its history, the Committee of papers, with whom the suggestion originated, deemed it incumbent on them to shew the Society at large the grounds upon which they rested their recommendation: and the substance of the arguments they then used I am now requested by the Society to lay before your Lordship in Council.

It is not from a declining Society that an appeal is made, to save it from impending ruin or to enable it to support its expences on the same scale of efficiency as heretofore. On the contrary, the Society never had a more flourishing list of contributing Members, nor was it ever more actively engaged on the multiplied objects of its attention. Indeed it would be difficult to mention any department in which its duties have not materially increased within the last few years.

By the transfer of the Oriental publications from the Education Committee a very important and responsible task has been thrown upon the Society, which it is most anxious to perform with diligence and satisfaction to the increasing body of Oriental scholars in Europe, who have expressed a common feeling and interest in its efficiency and permanancy.

By the transfer of the Oriental manuscripts and printed volumes from the College of Fort William the Society's library has been doubled, and the charge and responsibility of its management proportionately increased. The Society cannot be insensible of the obligation of making known its contents, of encouraging and providing accommodation for copyists, and of guarding property of increasing value. Thus the extension of the library has been attended with consequences which are felt in various matters of detail that cannot well be described.

Literary publications have also sought the Society's auspices in greater number of late than heretofore; and the government has paid it the compliment of seeking its advice and of following its suggestions in respect to many literary undertakings for which the public patronage had been solicited.

The government of *France* has condescended to employ the Society as the medium for procuring additions to the superb Oriental library of the French nation, and many distinguished Orientalists of the Continent have solicited the same favor.

From all these sources the responsibility, the substantive existence of the Society has derived strength and lustre; but every enlargement of its connections and every new field of its operations cannot but call for some additional expenditure or point out some desideratum which the Society's means are unable to provide; and this must be always more prominently felt where, from all the officers of the institution affording their services gratuitously, there is a reluctance in imposing new duties or expecting an increased devotion of their limited leisure.

But it is particularly in the physical branch of its labours—a vast field comprehending, according to the emphatic expression of Sir WILLIAM JONES, "whatever is produced by nature within the geographical limits of Asia," that the Asiatic Society feels itself most backward and deficient of means.

The rapid strides that have been made in physical inquiry throughout the world in the present age, have been compassed only by national efforts. By these have the schools of *Paris* been raised to the perfection of which they now boast, and her museums stored with most instructive and precious collections.

By the combinations of the wealthy, aided by a popular government is England now beginning to rival her. A national museum is indeed throughout *Europe* become an essential engine of education, instructive alike to the uninformed who admires the wonders of nature through the eye alone, and to the refined student who seeks in these repositories what it would be quite out of his power to procure with his own means.

The Asiatic Society, or it may be allowable to say the metropolis of British India, has had the germs of a national museum as it were planted in its bosom. As at *Paris* a new era was opened in the history of its great museum, the Jardin des Plantes, through the discoveries of extinct and wondrous animal forms exhumed from the rocks on which the town was built, and which required all the adjuncts of comparative anatomy for their investigation even by the master-hand of the great CUVIER; so in *Calcutta* through the munificence of a few individuals and the development of fossil deposits in various parts of India hitherto unsuspected, we have become possessed of the basis of a grand collection, and we have been driven to seek recent specimens to elucidate them. Our desire has been warmly seconded by all who have enjoyed the opportunity of contributing; from *China*, from *New South Wales*, from the *Cape*, and from every quarter of the Honorable Company's possessions, specimens of natural history, of mineralogy, and geology, have flowed in faster than they could be accommodated, and the too little attention they have received has alone prevented similar presentations from being much more numerous; for it is but reasonable to suppose that of the stores continually dispatched to England or the Continent, the Society would have received a larger share, had it done proper honor to what it has received.

In May 1835, the Society resolved to try the experiment of appointing salaried officers to the charge of its museum. For two years economy in other departments has enabled it to maintain this system, and the good effects of the measure are visible to all who visit the rooms. Yet not being able to purchase more than a small portion of the time of a competent naturalist, the benefit has been comparatively limited, and now at the very commencement of the experiment the state of the Society's funds will compel it to withhold further support from its incipient museum unless some fresh source of income be provided.

These then, are the motives that have persuaded the Society of the propriety of an appeal to the Ruling Power:—not to contribute to the ordinary wants and engagements of the institution, but to convert that institution into a public and national concern, by entrusting it with the foundation and superintendence of what has yet to be formed for the instruction of our native fellow subjects, as much as for the furtherance of science,—a public depository of the products of nature in India and the surrounding countries properly preserved, properly arranged, and properly applied.

To effect such an object it is indispensable that the services of a professional naturalist of high attainments should be engaged, and that he should have at his command the means of working effectually, and of devoting his whole time to the employment.

What, it may be asked, will be the return to government if the state undertake to supply such an officer? To this question more than one satisfactory answer may readily be given.

The Honorable Company have in Leadenhall Street a very valuable museum supported at considerable expense. To that museum, ours would be a powerful auxiliary. Duplicates of every sort here collected might be set apart for England. Again the local government has scientific expeditions continually employed in exploring the country. Geographical, geodesical, and statistical information is continually under collection without any office of record, or officer of analysis, to whom it can be appropriately referred for digestion. Efforts are continually misemployed for want of proper direction, and opportunities are lost for want of proper instructions that may be ever regretted by the scientific world. Again, the means of education in the natural sciences would be improved or rather created by the formation of a museum, the superintendent of which would always be able to devote a portion of his time to demonstrations and lectures, either expected as a part of his duty, or yielding a means of partial reimbursement.

But the Society feels that it is almost unbecoming to suppose that the Government of a great country would ask for reasons to support the present application; for the encouragement given to botanical pursuits by the maintenance of two public gardens at considerable charge, and the sums placed at the disposal of the agricultural and horticultural societies and to similar institutions, are so many evidences that the Government have only to be convinced that the object is one of essential public benefit, or calculated to promote scientific discovery, when the inclination to provide the necessary support will not be wanting. The expenditure that has been bestowed upon the theoretical admeasurement of the earth's surface, for the elaborate determination of which the Honorable Company's Government has been justly held up to the admiration of the world, is an instance particularly in point. The Society has ever felt that the public grants to those and numerous other objects of a similar nature, have been boons to itself, so far as they have promoted the researches contemplated, in its original foundation; and if on this occasion it fails to impress upon Government the claims of other branches of science and literature, all of which require and will benefit by the establishment of a public museum, the Society will attribute it rather to the weakness of the appeal made on its behalf than to the real weakness of its cause.

I have only in conclusion, to explain that although the Society in the accompanying resolution has ventured to name a specific sum which would probably be sufficient for the objects which it has in view yet the members would leave it entirely to the superior judgment of your Lordship in Council to determine what sum it would be expedient to devote from the public finances towards the general furtherance of the Society's objects; should it indeed appear to you that the application which I have been requested to lay before Government, is based on sound and reasonable arguments, and that it merits the consideration and support which I have ventured, as much from my own feelings as from my duty to the Society, to urge in its favor.

I have the honor to be, &c.

Calcutta, 15th June, 1837. (Signed) EDWARD RYAN,
President.

[For a copy of the Resolutions annexed see page 400.]

To the Honorable Sir E. RYAN, Knight.
President of the Asiatic Society.

HONORABLE SIR,

The representation submitted by you on behalf of the Asiatic Society of Calcutta has been considered by the Right Honorable the Governor General of India in Council with the attention due to the importance of the objects for which the assistance of Government is solicited, and to the character of the Society and of those who have united in the resolution to make this appeal.

2. The Right Honorable the Governor General of India in Council fully admits that the public of Europe and of Asia have incurred a heavy debt of gratitude to the Society for the persevering and successful efforts it has made for more than half a century to develope the literary resources of Asia, and to ascertain and collect objects of scientific and antiquarian interest. His Lordship in Council feels also, that although the publication of these results, through the Researches of the Society and in other works of wide circulation, has contributed largely to the advancement of general science, and has given to the labours of its members all the utility that such diffusion could impart, still, without a museum and library in which the products of art and nature, and especially coins and other interesting remains of antiquity, might be collected for the personal examination of the more curious; one important means of deriving benefit from those labours must still be wanting.

3. His Lordship in Council is further sensible that the expense of establishing such a museum, with its necessary adjuncts, cannot be expected in this country to be met by voluntary contributions from the limited number of persons who take an interest in such pursuits; and therefore, although the Society has already done much towards preparing the ground for such an establishment, that it cannot be maintained in the creditable and useful condition necessary for the attainment of the objects desired, unless aided liberally by the Government, in like manner as similar institutions in Europe are supported from the public treasury.

4. But although his Lordship in Council acknowledges all these claims on the liberality of Government, he yet feels precluded from giving his immediate sanction to the specific annual grant solicited by the Asiatic Society in this instance, without previous reference to the Honorable the Court of Directors, to whom however it is his intention, in forwarding your representation, to submit a strong recommendation in its favor.

5. There are many circumstances which induce the Governor General in Council to consider that the proposition submitted on this occasion is peculiarly one to be decided by the home authorities, rather than by the Local Government. In the first place, the Honorable Court of Directors are themselves at considerable expense in keeping up a museum and library at the India house, and though his Lordship in Council concurs with you in thinking that such institutions in Europe, however perfect, do not supercede the necessity of providing similar in India likewise,—with reference especially to the spirit of literary inquiry and scientific research which it is desired to excite and encourage amongst the native youth of India; still the fact that the Honorable Court have a separate institution of their own, points to the propriety of making them the judges of its sufficiency or the contrary for Indian purposes; moreover, were the Government of India to sanction a specific annual grant for a museum and library in Calcutta under the management of your Society, such a grant would reasonably be made a precedent for similar applications from learned societies at other presidencies, and his Lordship in Council is not prepared to decide without a reference to England upon the relative claims of such societies with reference to the circumstances of the institutions themselves and of the presidencies and places where they may be established.

6. His Lordship in Council feels convinced that the Society may rely with confidence on the liberal disposition of the Honorable Court and on its desire to promote and encourage objects of public utility, especially such as have a tendency to advance knowledge and to extend the spirit of research, now peculiar to European nations, to the population of the countries under their Government: his Lordship in Council has therefore the less hesitation in referring the Asiatic Society's present representation to the decision of the home authorities.

I have the honor to be, &c.

Council Chamber,
28th June, 1837.

H. T. PRINSEP,
Secy. to Govt.

The Secretary then proposed, as the application to Government might be considered for the present at least as having failed, that the museum should he placed upon a reduced scale, retaining the services of the Messrs. BOUCHEZ as assistant Curators, and profiting by the voluntary attendance of Members who take an interest in the subject to supply the place of a paid Superintendent. He recommended the fixing of two mornings in the week at 6 A. M. as visiting mornings, which would obviate the inconvenience of such attendance; he thought a few minutes of co-operation and instruction to the assistant who was acknowledged to be skilful in the preparing and setting up of specimens, would suffice to maintain the museum in an efficient state; and he would issue invitations to all natu-

ralists not in the Society, and foreigners visiting the place for scientific objects, to join in these reunions.

After much discussion, the Lord Bishop proposed, seconded by Sir B. MALKIN, that as 200 rupees was the sum actually wanted to support the museum in its present state, a second application should be made to Government for a temporary grant of that amount, pending the reference to the Hon'ble the Court of Directors.

Colonel CAULFIELD proposed as an amendment, that in addition to the 200 rupees for the establishment, the Society should request a further monthly sum of 800 rupees to be expended on the collection of specimens of natural history and other objects of scientific interest, the produce to be made over to Government as a repayment of advances, in case of an unfavorable reply from the Hon'ble Court.

The amendment having been put from the chair was carried by a large majority.

Dr. D. STEWART, secretary of the Statistical Committee, communicated the following letter from Government on the subjects of the committee's researches which were now progressing with vigour, although very speedy or showy results were not yet to be expected. The following gentlemen (Members of the Society) had by invitation been joined to the Committee: Messrs. G. T. MCCLINTOCK, H. PIDDINGTON, J. CURNIN, J. BIGNELL, J. BELL, Baboos PRASSONNOCOMAR TAGORE, and RUSOMOY DUTT.

To D. STEWART, Esq.
Sec. to the Statistical Committee of the As. Soc.

SIR,

I am directed by the Right Honorable the Governor of Bengal to acknowledge the receipt of your letter of the 17th ultimo, and to request that you will inform the Statistical Committee, that His Lordship has learnt with great satisfaction that the Asiatic Society has directed its attention to a subject of the utmost importance, for the details of which the Government has necessarily very little leisure.

The Governor will gladly permit the Committee to have access as they request to any Statistical documents of value which are deposited in any of the public offices and to make public such parts of their contents as may appear to deserve it.

The circular letter which you allude to, in your 3rd paragraph as having issued (under date the 25th of April last) to the several commissioners in the Lower Provinces, was merely a requisition upon the several functionaries of Government in the Judicial and Revenue Departments for all the aid which they could afford to the Medical officers employed in collecting Statistical information.

A copy of the instructions issued by the Medical Board to the officers under their authority above-mentioned, is annexed for the information of the Statistical Committee.

After perusing that paper in connexion with the circular from this Department above referred to, the Statistical Committee will perhaps be able to point out in what manner all the means employed or available may be so used in union or collaterally as to produce the effects most beneficial to the general interests of knowledge.

The Committee are probably aware that a number of essays on subjects of medical topography are in course of publication by the Medical Board.

I have, &c.

Fort William, 8th June, 1837.

(Signed) R. D. MANGLES,
Secy. to the Govt. of Bengal.

Library.

The following books were presented:

The dispatches of the Marquis WELLESLEY, vol. III.—*presented by the Hon'ble Government of India.*

Marathee Atlas containing nine maps by DADOBA PANDURING and NANA NARAYUN—*by the Author, through Mr. W. H. Wathen, Chief Sec. Bombay Government.*

Moysis Chorenensis Historiæ Armeniacæ Libri III. Armenian and Latin, London, 1736, Edition Whistoni—*by Mr. Elias Avdall, through Mr. J. Avdall.*

Eusebii Pamphili Caesariensis Episcopi Chronicon Bipartium, Armenian and Latin with Greek fragments, Venice, 1818, in 2 vols.—*by ditto, ditto.*

Meteorological Register for May, 1837—*by the Surveyor General.*

The Indian Review and Journal of Foreign Science and Arts for June and July —*by Dr. Corbyn.*

A manuscript history of *Juanpoor* in Persian, lent for the purpose of being copied. Also, the Tohfeh-Tazeh, or history of the present Rája's family of *Benares—by Captain A. Cunningham, Engrs.*

STIBLING on the countries between Persia and India—*presented by the Author.*

Literary.

Mr. Secretary MACNAGHTEN forwarded on the part of the Right Hon'ble the Governor General in Council, a MS. Grammar of the Brahuiky language, prepared by Lieutenant R. LEECH of the Bombay Engineers.

A note on the Ruins of old Mandivee in Cutch and a legend of VERJEE the son of VIKRAMADITYA, by Lieutenant J. POSTANS, was communicated by Mr. WATHEN, Chief Secretary, Bombay.

Read a letter from the Rev. Mr. STEVENSON of Bombay, forwarding his version of the lát alphabet and inscriptions.

Mr. STEVENSON has made known and lithographed his alphabet, and a portion of the lát inscription as read by him, in consequence of the announcement of the discovery of the alphabet in Calcutta which had been communicated to Mr. WATHEN, but which Mr. STEVENSON honorably requested might not be shewn to him until he had placed his own interpretation on record. The alphabet adopted by him is essentially different from that obtained by the analysis of the Bhilsa inscriptions, and in applying it to the *Delhi* lát the author has imagined the language of the latter to be Sanscrit: and he concludes the pillar to be "a Jayastambha or triumphal column erected by a sovereign of Márwár to celebrate his victories in Hindustan," results altogether at variance with those arrived at here.

The Secretary was induced by Mr. STEVENSON's communication to lay before the Society the transcript and translation he had yet hardly completed of the *Feroz* lát inscription.

It will be seen in Article II. of the present No. that the inscription is in the Magadhi language, and that it contains a series of edicts connected with the Buddhist faith issued by DEVANAMPIYA PIYADASI, a king of *Ceylon*, who was converted to Buddhism in the reign of DHARMA ASOKA about 300 years before Christ.

Captain S. W. BONHAM, *Dinapore*, presented a very small cocoanut obtained at *Arracan* and considered a curiosity.

Mr. HODGSON presented a box of *Nipal* snakes.

Physical.

Mr. SEPPINGS presented a piece of copper from the bottom of the ship Guide or Wm. Wallace, lately struck by lightning while in dock.

A hole of 8 inches diameter was pierced through the copper, although hardly a perceptible trace was left of the passage of the electric fluid through the plank in contact with it. The mast was shivered.

M. DELESSERT exhibited to the meeting the superb ichthyological collection made by himself for his uncle at *Paris*, during a residence of a few months in Calcutta.

Lord AUCKLAND presented the skeleton of a mouse-deer (*Moschus Javanicus?*) mounted in the museum.

The male and female of *Satyra*, presented by Dr. A. CAMPBELL, also three jungle fowl, *Phasianus gallus*, ditto.

Colonel D. M. MACLEOD Chief Engineer, presented a third fragment of fossil bone (ferrugenous) brought up by the auger in the Fort from a depth of 375 feet. He subsequently added the following particulars of the progress of the boring:—

Boring operations at Fort William, July 5th, 1837.

"The Chief Engineer has the satisfaction of stating that at length a stratum of clay has been reached, at a depth of 380 feet, and that the auger having penetrated 18 inches further has brought up blue clay mixed with a large quantity of apparently decayed wood, a specimen of which accompanies; the tubes have only gone down 377 feet, but it is hoped that they may be forced downt hrough the remainder of the bed

of sand to the clay to-morrow, when by a cessation of the influx of sand the operation will proceed with much more rapidity."

The appearance of the clay is precisely that of the black peat-clay found at the depth of 14 to 20 feet below the surface, and it must be the debris of a similar *Sundarban* tract formed anterior to the deposit of the 380 feet of superincumbent sand and clays. The wood is highly charred, but by no means converted into coal.

Col. MACLEOD also presented a specimen of a two-headed snake caught alive at *Moorshedabad.*

Mr. W. T. BAXTER, Branch-pilot, presented a specimen in spirits of the sea-horse taken off *Point Palmiras.*

Major DAVIDSON, Engrs., described a species of flying serpent which he believed to be unknown to naturalists.

B. H. HODGSON, Esq. gave the following description of the *Gauri Gau* of the *Nipal* forest.

"With infinite trouble and expense I have at length procured complete spoils of both sexes of the *Gauri Gau.* The ribs are but 13 pair: the skulls of both male and female are alike distinguished by enormous size, and by a broad, and long, and flat forehead surmounted by a prodigious semicylindric crest. It is the spinous processes of the *dorsal* vertibræ *only,* that cause the extraordinary elevation of the fore-quarters, those of the *cervical* not being raised at all. The elevation extends longitudinally from the first to the last pair of ribs, rising and falling suddenly, but with the rise *more* abrupt than the fall. The extreme elevation is 14 inches above the spinal column, and is reached by the third process from the anterior extremity. Here, then is a singular animal; Bos as to the number of the ribs and as to the general form of the cranium, but surely distinguished sufficiently from Bos, as a separate subgeneric type, by the far greater size of the skull, the astonishing development of its frontal crest, and the no less remarkable development of the spinous processes of the dorsal vertebræ, which last osteological peculiarity gives the live animal the appearance of a camel or camel-leopard if the head be concealed.

"I call this type Bibos, a name that is equally good if it be supposed to indicate an ox of unusual magnitude (quasi Bis and Bos) or an animal osculant between Bison and Bos (quasi Bi—Bos). You remember my delineations of the skull comparatively with those of the tame and wild buffalo and tame ox. No one could look at them and suppose this animal a Bison, if the correctness of CUVIER'S view were admitted: and, for my part, I have always regarded the *Gauri Gau* as a separate link between Bos and Bison. But it is only within the last week that, by procuring complete skeletons of *both* sexes, I have satisfied myself of the fact. I have not the least doubt that the Urus of the ancients (known to us only by fossil crania) was a *Bibos,* that is, an animal of the same type as our living Indian wild bull of the saul forest, and of other wilds. Whether my animal be the Gaurus or the Gavœus of *books,* no soul can tell; for the sufficing reason that there is no adequate or admissible account of either of the latter in books. Some call these creatures bulls; others call them Bisons:—what they really be, we know not; and *therefore* I shall give my type a separate specific name or *Subhemachalus.*

"The *Gauri Gau,* then, of the saul forest is *Bibos Subhemachalus,* nob., and type of the new subgenus Bibos. The Society shall have a very full and particular account of it presently; meanwhile the osteological peculiarities already spoken of, stamp our animal with a very striking character of novelty, whilst they give a singular revived interest to whatever the classics have left us about their Urus.

"The hair is as close and glossy as in Bos, only somewhat elongated and curled on the forehead and knees: the colors are usually red or black or piebald, the tail does not reach to the hock, in other words, is very short; all structural peculiarities fall into the subgeneric character: the specific character may be given in two words.

"Large wild Indian Bibos with close glossy hair, of a red or black color, ten feet from snout to rump, and five and a half feet high at the shoulder, *Gauri Gau* of Hindus."

Dr. SPILSBURY presented part of the fossil jaw of a horse, from *Brimham Ghat,* discovered by Mr. SMITH.

Also fossil shells of reversed whorls silicified, from *Sao Kharn Ghat,* ten kos west of *Baitool,* similar exactly to those noticed by Dr. VOYSEY in the *Gawilgiri* trap.

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of June, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.			Observations at 4 P. M.							Calculated Humidity.			Register Thermometer extremes.		Rain.	Wind.		Weather.	
	Old stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Cold on roof.	Heat in sun's rays on roof.		10 A. M.	4 P. M.	Morning.	Evening.
1	29,467	,396	85,3	12,6	13,4	74,6	84	55	66	59	,370	,274	97,7	18,2	19,3		73	37	48	26	83,2			S. W.	o.	clouds.	cloudy.
2	,401	,425	84,5	23,8	26,3	65,5	61	24	32	40	,370	,280	100,5	29,1	28,5	58,8	51	16	23	19	79,8			N.W.	N.W.	haze.	Hh. wind.
3	,564	,491	93,6	24,0	26,6	57,3	56	22	27	31	,464	,370	102,3	35,2	35,6	50,0	42	7	20	19	75,1			o.	o. W.	do	hazy.
4	,58	,54	5,2	25,2	26,5	53,0	62	20	34	26	,464	,40	102,7	32,7	35,0	50,0	50	12	22	22	76,2			W.	W.	do	do
5	,641	,581	84,7	14,3	16,2	72,0	80	50	59	49	,546	,476	99,9	17,2	18,1	72,7	75	40	51	46	77,4			S. W.	W.	cir. cum.	fine.
6	,669	,604	84,7	8,8	10,5	74,9	88	67	74	58	,570	,483	96,5	12,9	15,0	73,6	82	55	63	53	81,2			W.	S. W.	fine.	do
7	,611	,5	81,6	8,2	10,1	75,1	89	70	76	57	,560	,474	96,4	11,7	13,6	76,3	84	60	66	53	83,2			S. W.	S. W.	clear.	clear.
8	,7	,6	92,9	9,5	11,2	75,2	88	65	74	57	,583	,516	95,5	11,7	13,2	75,7	85	60	66	53	84,2		,15	S. W.	S. W.	cum.	cumuli.
9	,7	,6	86,9	6,9	8,3	72,7	91	72	80	63	,625	,547	93,3	10,5	11,8	73,4	86	61	70	52	72,0			N. W.	S. W.	cloudy.	overcast.
10	,701	,63	90,2	6,7	9,0	75,7	86	74	79	64	,554	,503	96,0	13,4	15,5	75,4	75	54	61	51	78,2			S.	S. W.	cum. stra.	clear.
11	,6	,5	92,7	8,6	11,5	76,5	81	63	61	61	,528	,485	96,5	12,7	14,2	75,0	76	57	52	50	82,4			S.	S. W.	cum.	haze.
12	,61	,5	84,5	8,7	11,0	76,0	81	67	61	58	,512	,441	96,9	13,6	13,9	75,0	75	55	51	44	83,5			S. W.	S.	clear.	drizzle.
13	,618	,5	83,6	8,6	11,9	77,0	84	70	66	60	,512	,456	95,4	14,9	15,2	69,9	71	50	45	66	82,5			S.	S.	do	haze.
14	,542	,5	94,8	8,7	11,0	80,0	84	68	66	64	,475	,429	92,5	8,8	8,7	79,4	85	67	68	50	82,2		,20	S. E.	N. W.	do	threatg.
15	,520	,4	93,5	7,1	10,3	78,7	86	73	70	62	,421	,352	95,1	14,0	15,4	73,7	75	52	51	32	74,5			W.	S. E.	do	do cloudy.
16	,4	,4	94,2	7,4	10,4	78,3	88	72	74	61	,360	,291	101,5	19,8	25,0	65,2	66	36	38	30	80,0			o.	S.	fine.	clouds.
17	,43	,4	98,9	16,0	20,2	71,0	70	40	44	42	,298	,24	102,9	22,2	25,7	64,6	61	34	33	49	82,0			W.	N. W.	do	nimbi.
18	,4	,3	97,5	17,3	20,0	69,0	71	40	45	41	,314	,272	97,5	15,5	15,0	74,2	71	40	45	65	80,6			W.	o.	do clear.	storm.
19	,5	,4	89,2	5,2	8,4	79,7	89	90	76	76	,467	,421	93,1	9,5	10,8	79,4	83	65	65	64	71,2			N. E.	N. E.	hazy.	cloudy.
20	,622	,5	85,2	2,9	5,6	79,7	94	87	87	84	,584	,523	85,5	2,6	4,7	80,0	95	89	89	64	77,8			o.	E.	shower.	do
21	,75	,70	89,5	3,2	5,7	77,8	93	86	84	76	,686	,632	89,7	7,1	9,3	75,5	86	72	70	69	75,0		,25	S. E.	S. E.	showery.	do
22	,7	,7	83,9	2,0	4,3	76,8	96	90	91	80	,689	,630	88,0	4,6	7,4	76,7	90	82	78	64	75,2		,10	S. E.	S. W.	cloudy.	do
23	,7	,6	87,9	4,4	2,9	75,4	89	82	76	66	,609	,540	93,1	4,9	8,5	78,3	86	81	70	64	76,0		,05	S.	S. W.	overcast.	cum. stra.
24	,6	,6	86,3	3,6	6,7	78,7	90	85	78	73	,496	,4	93,7	5,4	6,0	79,3	88	80	74		80,0		,60	S.	S.	haze.	do fine.
25	,6	,5	87,8	1,5	2,4		92	93	82		,536	,500	89,3	2,3	2,0		92	90	82		72,5		,70	S.	S.	cum.	threatg.
26	,5	,5	88,1	1,7	2,5		92	92	82		,563	,522	82,5	2,6	3,0		90	87	86		71,2		1,95	S.	S. W.	hase	st rm. rain.
27	,597	,556	86,3	1,3	3,3		94	94	87		,479	,436	87,9	4,1	6,3	78,8	88	92	74	75	71,0		,25	S. W.	S. E.	cloudy.	nimbi.
28	,560	,536	85,0	2,8	5,0	76,2	92	87	82	75	,504	,455	82,9	2,3	3,0	77,0	94	90	87	83	71,0		,45	S. W.	S. W.	do	rain.
29	,548	,549	85,1	3,3	5,4	75,9	91	85	80	74	,460	,419	90,4	7,1	9,8	75,8	83	72	65	64	79,5			S. W.	S. W.	do	hazy.
30	,543	,497	87,5	2,8	6,0	77,7	92	87	82	72	,479	,42	85,4	3,8	6,3	76,7	89	84	76	75	81,0			S. W.	N.	cir. stra.	threatg.
Mean,	29,502	,536	90,8	8,5	10,7	74,0	84	68	69	60	29,502	,442	94,0	12,3	13,9	72,5	78	59	59	53	78,0		4,70	S.	W.	Rains set in light and late.	

Finding so great a discrepance in the tension shewn by the hair hygrometer I have recompared the hundredth degree or extreme moisture and find it to reach 102.5 which will necessitate a correction of the tensions to the amount of about 6 per cent. Being a new hair, it had not become properly stretched when first set up.—J. P.

Thermometer broken.

JOURNAL

OF

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I.—*An Examination of the Páli Buddhistical Annals. By the Hon'ble* George Turnour, *Esq. of the Ceylon Civil Service.*

At a period when there is a concurrence of evidence, adduced from various quarters, all tending to establish the historical authenticity of that portion of the Buddhistical annals which is subsequent to the advent of Sákya, or Gotamo Buddho, an attempt to fix the date at which, and to ascertain the parties by whom, some of the most important of those annals were compiled, cannot be considered ill-timed; and in reference to the character of the notices that have recently appeared in the Bengal Asiatic Journal, I would wish to believe that discussions in its pages, having for their object the establishment of those points, would not be deemed out of place.

As far as our information extends at present, supported by an obvious probability arising out of the sacred character, and the design of those works, which renders the inference almost a matter of certainty, the most valuable and authentic, as well as the most ancient, Buddhistical records extant are those which may be termed the Buddhistical scriptures and their ancient commentaries, called, respectively, in the *Páli* or *Mágháda* language, the Pitakattayan and the Atthakathá.

To Mr. Hodgson, the resident in Nepâl, the merit is due of having brought into notice, and under direct European cognizance, the *Sanskrit* and *Tibetan* versions of these voluminous works. To this important service he has superadded further claims on the gratitude of the literary world, by the publication of various essays, illustrative of the scope and tendency of the creed, of which Sákya was the au-

thor—and those annals the recorded repositories. Fortunately for the interests of oriental research, at that particular juncture, the Asiatic Society received the assistance of Mr. CSOMA KOROSI in analyzing the *Tibetan* version also of those works; whose labors being of a more analytic and less speculative character, (although exerted in the examination of the *Tibetan* which appears to be translated from the *Sanskrit* version) are better adapted than those of Mr. HODGSON to aid the prosecution of the particular description of investigation to which I am about to apply myself.

In the recently published 20th Volume of the Asiatic Researches is contained Mr. CSOMA KOROSI's analysis of the first portion of the KA'H-GYUR, which is readily recognized, and indeed is admitted to be, the *Tibetan* name for the PITAKATTAYAN; from which analysis I extract his introductory remarks, as they are explanatory of the character of that compilation collectively, while the analysis itself is confined to the *Dulvá* portion of the KÁH-GYUR.

"The great compilation of the Tibetan Sacred Books, in one hundred volumes, is styled Ká-gyur or vulgarly Kán-gyur, (བཀའ་འགྱུར, *bkah-hgyur*) i. e. 'translation of commandment,' on account of their being translated from the Sanskrit, or from the ancient Indian language (རྒྱ་གར་སྐད, *rgya gar skad*), by which may be understood the *Prácrita* or dialect of *Magadha*, the principal seat of the Buddhist faith in India at the period.

"These books contain the doctrine of SHA'KYA, a Buddha, who is supposed by the generality of Tibetan authors to have lived about one thousand years before the beginning of the Christian era. They were compiled at three different times, in three different places, in ancient India. First, immediately after the death of SHA'KYA, afterwards in the time of ASOKA a celebrated king, whose residence was at *Pátaliputra*, one hundred and ten years after the decease of SHA'KYA. And lastly, in the time of KANI'SKA, a king in the north of India, upwards of four hundred years from SHA'KYA; when his followers had separated themselves into eighteen sects, under four principal divisions, of which the names both Sanskrit and Tibetan, are recorded*.

"The first compilers were three individuals of his (SHA'KYA's) principal disciples. 'UPA'LI',' (in Tib. 'NYE'-VA'R-*hKHOR*,') compiled the '*Vinaya Sútram*,' (Tib. *Dul-védo*;) 'ANANDA' (Tib. 'KUN-*dGA'VO*,') the '*Sútrantah*,' (Tib. the *Do* class;) and 'KA'SHYAPA,' (Tib. 'HOT-SRUNG,') the '*Prajnyá-páramitá*,' (Tib. *Sher-ch'hin.*) These several works were imported into Tibet, and translated there between the seventh and thirteenth centuries of our era, but mostly in the ninth. The edition of the *Ká-gyur* in the Asiatic Society's possession appears to have been printed with the very wooden types that are mentioned as having been prepared in 1731 or the last century; and which are still in continual use, at *Snár-t'hang*, a large building or monastery, not far from *Teshi-lhun-po* (བཀྲ་ཤིས་ལྷུན་པོ, *bkra-shis-lhun-po*).

* See p. 25 in the life of SHA'KYA, in the Ká-gyur collection.

"The *Ká-gyur* collection comprises the seven following great divisions, which are in fact distinct works.

I. *Dulwá* དུལ་བ, (Sans. *Vinaya)* or, 'Discipline,' in 13 volumes.

II. *Sher-ch'hin* ཤེར་ཕྱིན, (Sans. *Prajnyáramitá)* or, 'Transcendental wisdom,' in 21 volumes.

III. *P'hal-ch'hen* ཕལ་ཆེན, (Sans. *Buddha-vata sanga*) or, 'Bauddha community,' in 6 volumes.

IV. D,*kon-séks* དཀོན་བརྩེགས, (Sans. *Ratnakúta)* or, 'Gems heaped up,' in 6 vols.

V. *Do-dé* མདོ་སྡེ, (Sans. *Sútranta*) 'Aphorisms,' or Tracts, in 30 vols.

VI. *Nyáng-dás* མྱང་འདས, (Sans. *Nirvána*) 'Deliverance from pain,' in 2 vols.

VII. *Gyut* རྒྱུད, (Sans. *Tantra*) 'Mystical Doctrine, Charms,' in 22 vols. forming altogether exactly one hundred volumes.

"The whole *Ká-gyur* collection is very frequently alluded to under the name, *De-not-sum* སྡེ་སྣོད་གསུམ, in Sanskrit *Tripitakáh*, the 'free vessels or repositories,' comprehending under this appellation. 1st. The *Dulwá*. 2nd. The *Do*, with the *P'hal-ch'hen*, *Kon-séks*, *Nyáng-das* and the *Gyut*. 3rd. The *Sher-ch'hin*, with all its divisions or abridgments. This triple division is expressed by these names: 1. *Dulwá*, (Sans. *Vinaya*.) 2. *Do*, (Sans. *Sútra*.) 3. *Ch'hos-non-pa* ཆོས་མངོན་པ, (Sans. *Abhidharmáh*.) This last is expressed in Tibetan also by *Non-pa-dsot* མངོན་པ་མཛོད, by *Yum* ཡུམ, and by *Mamo* མ་མོ. It is the common or vulgar opinion that the *Dulwá* is a cure against cupidity or lust, the *Do*, against iracundy or passion; and the *Ch'hos-non-pa*, against ignorance."

Enough of identity, I conceive, is demonstrated in this preparatory extract to remove all doubt as to the *Tibetan* version (whether translated from the *Sanskrit* or "the *Prácrit*, the dialect of *Magadha*)," and the *Páli* or *Mághadha* version extant in *Ceylon* being one and the same compilation; designed to illustrate, as well the same sacred history in all its details, as the same religious creed; whatever slight discrepancies may be found to exist between the two in minor points.

Beyond the suggestion of this identity, certifying at the same time that the *Pitakattayan* and the *Aṭṭhakathá* extant in *Ceylon* are composed in the *Páli* language, and that they are identical with the *Páli* versions of these works in the Burmese empire, it is not my intention to advance a single assertion; or to reason on the assumption that any one point required to be established has been already either proved or admitted to be such elsewhere. On the evidences and authorities I have to adduce, the decision will be allowed to rest, as to whether the Ceylon *Páli* version of the *Pitakattayan* be, what it purports to be, the one first authenticated in the year Sa'kya died,

(B. C. 543;) and as to whether the *Aṭṭhakathá*, also represented to have been first propounded on the same occasion, and ultimately (after various other anthentications) recompiled in this island in the *Páli* language, by BUDDHAGHOSO, between A. D. 410, and A. D. 432, were composed under the circumstances, and at the epochs, severally, alleged. The importance however of satisfactorily establishing these questions, I wish neither to disguise nor underrate. For on the extent of their authenticity must necessarily depend the degree of reliance to be placed as to the correctness of the mass of historical matter those compilations are found to contain. Although the *contemporaneous* narrative of historical events furnished in the *Aṭṭhakathá* are comprised between the years B. C. 543 and B. C. 307, (specimens of which, extracted from a *Tíká*, I have been able to adduce in the introduction to the *Maháwanso*) those notices are occasionally accompanied by references to anterior occurrences, which in the absence of other data for the illustration of the ancient history of India, acquire an adventitious value far exceeding their intrinsic merits.

I had contemplated the idea at one period of attempting the analysis of the entire *Pitakattayan*, aided in the undertaking by the able assistance afforded to me by the Buddhist priests, who are my constant coadjutors in my *Páli* researches; but I soon found that, independently of my undertaking a task for the efficient performance of which I did not possess sufficient leisure, no analysis would successfully develope the contents of that work, unless accompanied by annotations and explanations of a magnitude utterly inadmissible in any periodical. The only other form in which, short of a translation *in extenso*, that compilation could be faithfully illustrated, would have been a compendium, which however has been already most ably executed by a learned Buddhist priest, and as ably translated into English, by the best *Singhalese* scholar in this island, Mr. ARMOUR*. Under these circumstances, the course I purpose pursuing is merely to array the evidence on which the claim of these sacred works to authenticity is based—to show the extent and the subdivisions of the authentic version of the *Pitakattayan*,—to define the dates at which the three great convocations were held in India—as well as the date at which the *Pitakattayan* and the *Aṭṭhakathá* were first reduced to writing in *Ceylon*,—and lastly, to fix the epoch at which the present version of the *Páli Aṭṭhakathá* was completed by BUDDHAGHOSO in this island. When these points, together with certain intermediate links

* We regret we have not yet found space for the insertion of Mr. ARMOUR's sketch, which will be found in the Ceylon Almanac for 1835.—ED.

have been examined, I shall proceed then, by extracts from, and comments on, both the *Pitakattayan* and the *Aṭṭhakathá* to illustrate those portions of these works which are purely of an historical character, commencing with the genealogy of the kings of India. The ensuing extracts will show that Mr. ARMOUR's translated essay on Buddhism, as derived from the *Wisuddhimuggo*, a compendium formed by BUDDHAGHOSO himself, presents an abstract of the doctrinal and metaphysical parts of that creed, which, as being the work of that last great commentator on the Buddhistical Scriptures, acquires an authority and authenticity, which no compendium, exclusively formed by any orientalist of a different faith, and more modern times, can have any claim to.

Before I proceed to my extracts a few preliminary remarks are necessary for the adaptation of dates to the events described.

The Buddhistical era is dated from the day of SÁKYA's death, which having occurred on the full moon of the month of *Wésákho*, 2,480 years ago, the epoch, therefore, falls to the full moon of that month in B. C. 543.

In that year, the FIRST CONVOCATION was held at *Rájagoha* (the modern *Rájmahal**), then the capital of the *Mágadha* monarch AJÁTASATTO, in the eighth year of his reign.

The SECOND CONVOCATION was held a century afterwards in B. C. 443, at *Wésáli* (the modern *Allahabad*) then the capital of the *Mágadha* monarch KÁLÁSOKO, and in the tenth year of his reign.

The THIRD CONVOCATION was held 134 years after the second one, in B. C. 309 at *Páṭilipura* (the ancient *Palibothra*, and modern *Patna*), then the capital of the Indian empire, in the 17th year of the reign of ASOKO or DHAMMA'SOKO.

At the first of these CONVOCATIONS the orthodox version of the *Pitakattayan* was defined and authenticated, as will be seen by the ensuing quotations, with a degree of precision which fixed even the number of syllables of which it should consist. The commentaries made or delivered on that occasion, acquired the designation of the *Aṭṭhakathá*.

At the SECOND and THIRD CONVOCATIONS certain schismatic proceedings among the Buddhistical priesthood were suppressed, and the above authentic version of the *Pitakattayan* was rehearsed and reaffirmed on each occasion; and additional *Aṭṭhakathá* were delivered, narrative of the history of Buddhism for the periods that had preceded each of those two CONVOCATIONS.

* This is the usual supposition but, *Rájagriha* of *Behar* is undoubtedly the right place.—ED.

It is maintained, and the Buddhists in *Ceylon* implicitly believe, that the whole of the *Pitakattayan* and *Aṭṭhakathá* were preserved through this long line of the disciples of SÁKYA exclusively by memorial inspiration, without the aid of inscribed record.

In B. C. 306 MAHINDO, the son of emperor DHAMMÁSOKO also recognized to be one of those inspired disciples, visited *Ceylon*, and established Buddhism in it.

The particulars of this interesting historical event will be found in the *Maháwanso*. In this place I shall only observe that the *Pitakattayan* in *Páli*, and the *Aṭṭhakathá* in *Singhalese* are represented to have been orally promulgated by MAHINDO, and orally perpetuated by the priesthood he founded in *Ceylon*, till the reign of the Ceylonese monarch WATTAGANINI, who reigned from B. C. 104 to B. C. 76; when they are stated to have been recorded in books for the first time. The event is thus mentioned in the thirty-third chapter of the *Maháwanso*. I give the *Páli* passage also, to show, how utterly impossible it is to make it approximate to any rendering, which would admit of the only construction which a reasonable person would wish to place on it, viz.: that these sacred records were then for the first time not recorded, but rendered accessible to the uninitiated.

Pitakattayapálincha, tassá Aṭṭhakathancha tan,
Mukhapáṭhira ánésur pubbe bhikkhú mahámati,
Hániñ diswára Sattánan tadá bhikkhú samagatá,
Chiraṭṭhittathan dhammassa potthakésu likhápayun.

The profoundly wise (inspired) priests had theretofore orally perpetuated the text of the *Pitakattayan* and their *Aṭṭhakathá*. At this period, these priests, foreseeing the perdition of the people (from the perversions of the true doctrines) assembled; and in order that religion might endure for ages, recorded the same in books.

In this form (that is to say, the *Pitakattayan* in *Páli*, and *Aṭṭhakathá* in *Singhalese*), the Buddhistical scriptures were preserved in *Ceylon* till the reign of the Ceylonese monarch MAHA'NAMO, between A. D. 410 and 432, when BUDDHAGHOSO of *Magadha* visited *Ceylon*, revised the *Aṭṭhakathá* and translated them into *Páli*. This is an occurrence, as I have noticed above, of considerable importance to the questions under consideration. I am told that in his revised *Aṭṭhakatha* will be found notices explanatory of his personal history. I have not yet come upon those passages, and even if I had met with them, I should prefer the evidence of a third party to an autobiography, especially when I can quote from such an historian as the author of the *Maháwanso*, who flourished between the years A. D. 459 and A. D. 477, being at the most fifty years only after the visit

of BUDDHAGHOSO to *Ceylon*. The following extract is from the 37th chapter.

" A bráhman youth, born in the neighbourhood of the great bo-tree (in *Magadha*), accomplished in the '*wijja*' and '*sippa*;' who had achieved the knowledge of the three *wedos*, and possessed great aptitude in attaining acquirements; indefatigable as a schismatic disputant, and himself a schismatic wanderer over *Jambudipo*, established himself, in the character of a disputant, in a certain *wiharo*, and was in the habit of rehearsing, by night and by day, with clasped hands, a discourse which he had learned, perfect in all its component parts, and sustained throughout in the same lofty strain. A certain *Maháthéro*, named REWATO, becoming acquainted with him there, and saying (to himself), 'This individual is a person of profound knowledge; it will be worthy (of me) to convert him,' inquired, 'who is this who is braying like an ass?' (The bráhman) replied to him, 'Thou canst define, then, the meaning conveyed in the braying of asses.' On (the théro) rejoining, 'I can define it;' he (the bráhman) exhibited the extent of the knowledge he possessed. (The théro) criticised each of his propositions, and pointed out in what respect they were fallacious. He who had been thus refuted, said, 'Well then, descend to thy own creed;' and he propounded to him a passage from the '*Abhidhammo*' (of the *Pitakattayan*). He (the bráhman) could not divine the signification of that (passage); and inquired, 'whose *manto* is this?' 'It is BUDDHO'S *manto*.' On his exclaiming 'Impart it to me;' (the théro) replied, 'enter the sacerdotal order.' He who was desirous of acquiring the knowledge of the *Pitakattayan*, subsequently coming to this conviction: 'This is the sole road (to salvation);' became a convert to that faith. As he was as profound in his (*ghoso*) eloquence as Buddho himself, they conferred on him the appellation of BUDDHOGHOSO (the voice of Buddho); and throughout the world he became as renowned as BUDDHO. Having there (in *Jambudipo*) composed an original work called '*Nanódagan*;' he at the same time wrote the chapter called '*Atthasálini*,' on the *Dhammasangini* (one of the commentaries on the *Abhidhammo*).

" REWATO THE'RO then observing that he was desirous of undertaking the compilation of a '*Pariṭṭatthakathan*' (a general commentary on the *Pitakattayan*) thus addressed him: 'The text alone (of the *Pitakattayan*) has been preserved in this land: the *Aṭṭhakathá* are not extant here; nor is there any version to be found of the "*wádá*" (schisms) complete. The Singhalese *Aṭṭhakathá* are genuine. They were composed in the *Singhalese* language by the inspired and profoundly wise MAHINDO; the discourses of BUDDHO, authenticated at the three convocations, and the dissertations and arguments of SA'RIPUTTO and others having been previously consulted (by him); and they are extant among the *Singhalese*. Repairing thither, and studying the same, translate (them) according to the rules of the grammar of the Mágadhas. It will be an act conducive to the welfare of the whole world.'

" Having been thus advised, this eminently wise personage, rejoicing thereat, departed from thence, and visited this island, in the reign of this monarch (MAHA'NA'MO). On reaching the *Mahawiháro* (at *Anurádhapura*) he entered the *Mahápadhano* hall, the most splendid of the apartments in the *wiháro*, and listened to the *Singhalese Aṭṭhakathá*, and the *Thérawáda*, from beginning to

the end, propounded by the three *Sanghapáli*; and became thoroughly convinced that they conveyed the true meaning of the doctrines of the lord of *Dhammo*. Thereupon, paying reverential respect to the priesthood, he thus petitioned: 'I am desirous of translating the *Aṭṭhakathá*; give me access to all your books.' The priesthood, for the purpose of testing his qualifications, gave only two *gatha*, saying: 'hence prove thy qualification; having satisfied ourselves on this point, we will then let thee have all the books.' From these (taking these *gatha* for his text, and consulting the *Pitakattayan* together with the *Aṭṭhakathá*, and condensing them into an abridged form), he composed the compendium called the *Wisuddhimaggo*. Thereupon having assembled the priesthood who had acquired a thorough knowledge of the doctrines of BUDDHO, at the bo-tree, he commenced to read out (the work he had composed). The *dewatas*, in order that they might make his BUDDHAGHOSO's gifts of wisdom celebrated among men, rendered that book invisible. He, however, for a second and third time recomposed it. When he was in the act of producing his book for the third time, for the purpose of propounding it, the *dewatas* restored the other two copies also. The (assembled) priests then read out the three books simultaneously. In those three versions, neither in a verse, in a signification, nor in a single misplacement by transpositions; nay, even in the théro controversies, and in the text (of the *Pitakattayan)* was there in the measure of verse, or in the letter of a word, the slightest variation. Therefore the priesthood rejoicing, again and again fervently shouted forth, saying, 'most assuredly this is METTEYYO (BUDDHO) himself;' and made over to him the books in which the *Pitakattayan* were recorded, together with their *Aṭṭhakathá*. Taking up his residence in the secluded *Ganthakaro wiharo*, at *Anurádhapura*, he translated, according to the grammatical rules of the *Mágadhi*, which is the root of all languages, the whole of the *Singhalese Aṭṭhakathá* (into *Pálí*). This proved an achievement of the utmost consequence to all the languages spoken by the human race.

"All the *théros* and *ácháriyas* held this compilation in the same estimation as the text (of the *Pitakattayán*). Thereafter, the objects of his mission having been fulfilled, he returned to *Jambudipo*, to worship at the bo-tree (at *Uruweliya* in *Magadha*)."

The foregoing remarks, sustained by the ensuing translation of the account of the FIRST CONVOCATION, show that the following descrepancies exist between the *Tibetan* version of the *Káh-gyur* and the *Pálí* version of the *Pitakattayan* extant in *Ceylon*.

1stly, in making the age in which SA'KYA lived about one thousand years before the Christian era, instead of its being comprised between B. C. 588 and 543.

2ndly, in the omission of the SECOND CONVOCATION.

3rdly, in placing the THIRD CONVOCATION, which was held in the reign of ASOKO, in the 110th instead of the 234th year after the death of SA'KYA.

4thly, in stating that the next and last revision of the *Pitakattayan* took place only five hundred, instead of nearly a thousand, years

after the death of SÁKYA. In this instance, however, from the absence of names, there is no means of ascertaining whether the revision in question, applies to that of BUDDHAGHOSO, or to that of any other individual. From the date assigned, as well as mention being made of KANISKA, the author of that revision, may possibly be NA'GÁRJUNA, the NÁGASE'NO of *Pâli* annals, whose history I have touched upon in a former article. The foregoing extract from the *Mahâwanso* does certainly state that BUDDHAGHOSO returned to India, and that the *Aṭṭhakathá* were not extant then, at the time he departed to *Ceylon*, but I have no where met with any intimation of the propagation of his version in India; while in the "Essai sur le *Pâli* par Messrs. BURNOUF et LASSEN," it is shown that BUDDHAGHOSO did visit the eastern peninsula, taking his compilation with him.

5thly, in the *Tibetan* version of the *Káh-gyur* consisting of one hundred volumes*, while the *Pâli* version of the *Pitakattayan* does not exceed 4,500 leaves, which would constitute seven or eight volumes of ordinary size (though bound up in *Ceylon* in various forms for convenience of reference), the subdivisions of which are hereafter given. This difference of bulk would be readily accounted for, if Mr. KÖRÖSI had explained whether the accounts of the Convocations he gives were found in the text of the *Káh-gyur* which he was analyzing, or in a separate commentary. If they were found in the text, it necessarily follows that the commentaries (which alone could contain an account of Convocations held subsequent to the death of SA'KYA) must have become blended with the entire version of the *Tibetan* text, in the same manner that the "*Játakan*" division of the *Pâli* version in *Ceylon*, has become blended with the *Aṭṭhakathá* appertaining to it. By this blending together of the text and the commentary of the *Játakan*, that section has been swelled into *three* books of nine hundred leaves, instead of constituting the fourth part of *one* book, comprised in perhaps about one hundred leaves.

I have not yet obtained any accurate table of the contents of the whole series of BUDDHAGHOSO's *Aṭṭhakathá*. They are very voluminous, as may be readily imagined, when it is considered that they furnish both a commentary and a glossary for the entire *Pitakattayan*.

The *Aṭṭhakathá* on the whole of the *Winayopitako* is called the *Samantapásádiká*. It commences with an account of the THREE CONVOCATIONS. For the *Sattapiṭako* there is a separate *Aṭṭhakathá*

* These volumes contain much less than might be thought by those who had not seen them, being printed in a very large type.—ED.

for each section of it. The *Aṭṭhakathá* on the *Dighanikáyo* is called "*Sumangala Wilásiní.*" It opens with a description of the FIRST CONVOCATION only, and then refers to the above mentioned *Samantapasádiká*, for an account of the other TWO CONVOCATIONS. As the *Sumangala Wilásiní*, however, gives the most detailed account of the FIRST CONVOCATION, I have selected it for translation, in preference to the description given in the *Samantapásádiká*, to which I must have recourse for the accounts of the SECOND and THIRD CONVOCATIONS. This circumstance will explain why an occasional reference is made in the ensuing translation, to a previous account of the FIRST CONVOCATION.

The histories of the other TWO CONVOCATIONS which I reserve for a future communication, are less detailed, but embody more data of an historical character.

Translation of Buddhaghoso's Aṭṭhakathá, called the Sumangala Wilásiní, of the Dighanikáyo of the Suttapitako.

I adore SUGATO*, the compassionating and enduring spirit; the light of wisdom that dispelled the darkness of ignorance—the teacher of men as well as *dèwos*, the victor over subjection to transmigration!

I adore that pure and supreme "*Dhammo*," which BUDDHO himself realized, by having attained Buddhohood; and by having achieved a thorough knowledge thereof!

I bow down in adoration to those well-beloved† sons (disciples) of SUGATO, who overcame the dominion of *Máro* (death) and attained the condition of *arahat*,—the consummation of the eight sanctifications!

Thus, if there be any merit, in this act of adoration, rendered by me, in sincerity of faith, to the RATANATTAYAN‡,—by that merit, may I eschew all the perils (which beset my undertaking).

I (proceed now to) propound, as well as for the edification of the righteous, as for the perpetuation of *Dhammo*, an exposition of the supreme *Dighagamo (Dighanikayo)*, which is embellished with the most detailed of the *Suttani*, comprehensive in signification, thoroughly illustrated by BUDDHO and his disciples, and sustaining faith, by the power of virtue; and for the purpose of developing that exposition (of the *Dighanikayo)*, availing myself of the *Aṭṭhakathá* which was in the first instance authenticated by the five hundred *Arahantá* at the *(first)* CONVOCATION, and subsequently at the succeeding CONVOCATIONS, and which were thereafter, by the sanctified MAHINDO, brought to *Sihala*, and for the benefit of the inhabitants of *Sihala*§, transposed into the *Sihala* language, from thence I translate the *Sihala*‖ version into the delightful (classical) language, according to the rules of that (the *Páli)* language, which is free from all imperfections;—omitting only the frequent repetitions of the same explanations,

* From *su* and *gato* ("deity of) felicitous advent," an appellation of BUDDHO.
† Literally, "bosom-reared."
‡ The three treasures, viz. *Buddho*, *Dhammo* and *Sangho*.
§ *Ceylon*. ‖ *Singhalese*.

but at the same time without rejecting the tenets of the théros resident at the *Mahawiharo** (at *Anurádhapura)* who were like unto luminaries to the generation of théros, and the most accomplished discriminators (of the true doctrines).

The (nature of the) *Silakatha, Dhutadhammá, Kammaṭṭhánáni,* together with all the *Chariyáwidháni, Jhánáni,* the whole scope of the *Samápatti,* the whole of *Abhiññáyo,* the exposition of the *Paññá,* the *Khandá,* the *Dhátu,* the *A'yatanáni, Indriyáni,* the four *Aryáni-sachcháni,* the *Pachchayákárá,* the pure and comprehensive *Nayá* and the indispensable *Maggá* and *Wiphassanabhawana* —all these having, on a former occasion, been most perspicuously set forth by me, in the *Wisudhimaggo,* I shall not therefore in this place, examine into them in detail. The said *Wisudhimaggo* being referred to in the course of the four *A'gamá (Nikáyá* will afford, as occasion may require, the information sought.

Such being the plan adopted, do ye therefore (my readers), consulting also that work (the *Wisudhimaggo*), at the same time with these *Aṭṭhakathá,* acquire the knowledge of the import developed of the *Dighágamó.*

The contents of the *Dighágamo* are, of the *Waggo* (class) three—namely, the *Silawaggo,* the *Maháwaggo* and the *Pátikawaggo,* consisting of thirty-four *Suttáni* of which (*Dighágamo*) the *Silakkhandho* is the first *Waggo ;* and of the *Suttáni* (of that *Waggo)* the *Brahmajálan* is the first *Suttan.*

Concerning the *Bráhmajálan :—*

Its commencement (*"Ewammé sutan"*). "It was so heard by me" is the *Nidánan* (explanation) afforded by the venerable† A'NANDO on the occasion of the FIRST GREAT CONVOCATION (PATHAMA' MAHA' SANGI'TI').

Why was this FIRST GREAT CONVOCATION (held ?)

In order that the *Nidánan* of the *Winayapiṭako,* the merits of which are conveyed in the *Páli (Tanti)* language (might be illustrated). On this occasion also) (i. e. in the illustration of the *Suttapiṭṭako)* the object, be it understood, was the same.

When (was it held ?)

On the occasion on which BHAGAWA', the saviour of the three worlds, who had realized the reward of *Nibbánan,* by overcoming liability to further transmigration, having fulfilled the objects of his divine mission,—commencing with the propounding of the *Dhammappawattanan Suttan* on his first entrance as BUDDHO into *Báránasi,* to his having brought under sacerdotal subjection SUBADDHO, the *Paribbájako*—realized (at *Kasinárá* in the *Upawattano* garden of the *Malla* race) his *Parinibbánan* (while reposing) between two sal trees, on the dawn of the day of the full moon of the month of *Wésákho.*

Upon that occasion, when the *Dháta* (corporeal relics) of BHAGAWA' were distributed (at his funeral pile), the venerable MAHA'KASSAPO was the *Sanghathéro* (the chief priest) of seven hundred thousand priests there assembled. On the

* Vide Chap. XV. of the *Maháwanso,* for the construction of this *wiháro* commenced before C. B. 306, which is still in existence, though in a ruinous state at *Anurádhapuro.*

† This appears to be a term purely of veneration, without reference to the age of the party addressed.

seventh day after BHAGAWA' had obtained *Purinibbati*, (the said MAHA'KASSAPO) calling to his recollection the following declaration of the aforesaid SUBHADDO, who had been ordained in his dotage (which had been addressed to that assemblage of afflicted priests), viz. : ' Venerables ! enough, mourn not; weep not; we are happily released from the control of that great *Samano**. We have escaped from the calamity of being constantly told, ' this is allowable to you : that is not allowable to you.' Now whatever we may wish, that we can do : whatever we do not desire that we may leave undone ;'—and being convinced also that it would be difficult thereafter to convene such an assembly of the priesthood (MAHA'KASSAPO thus meditated) ' such is the posture of affairs !—sinful priests persuading themselves that the doctrines of the divine teacher are extinct, and availing themselves of the co-operation (of others) may without loss of time destroy the *Saddhammo*. As long as *Dhammo* can be maintained, the doctrines will as fully prevail as if the divine teacher were still in existence ; for it has been thus said by BHAGAWA' himself; ' A'NANDO ! let the *Dhammo* and *Winayo*, which have been propounded to, and impressed on, thee, by me, stand after my demise in the place of thy teacher !' It will be most proper, therefore, that I should hold a CONVOCATION on *Dhammo* and *Winayo* whereby this *Sásanan* (religion) might be rendered effective to endure for ages. In as much also as BHAGAWA' has said (to me) ' KASSAPO ! thou shalt wear my *Sanapansukúlá*† robes,' and as in that investiture of robes, an equality (with BUDDHO) was recognized, and he having added ' *Bhikkhus !* by whatever means my object has been gained, and emancipated from the dominion of the passions, and released from the sphere of impiety, I may have arrived at the attainment of the *Pathama Jhánan*, the blessed state derived from the beatitude which is free from the influence of painful doubts, and the besetting sins (of the human world) ; by the same means, *Bhikkhus !* KASSAPO also is destined to obtain it, and emancipated from the dominion of the passions, &c. is gifted likewise with the power of acquiring the *Pathama Jhánan*.' By this procedure, in having exalted me to a position equal to his own, in the attainment, in due order, of the nine *Sunápatti*, of the six distinct *Abhinna*, and of the *Uttarimanussa Dhammo*, he has vouchsafed especially to distinguish me. He has also distinguished me by comparing me, in thought, to the imperturbability of the air though a hand be waved through it ; and in conduct (of increasing grace) like unto the increasing moon. To him what else can constitute an appropriate return ? Assuredly none other. BHAGAWA' therefore, like unto a rája, who with due solemnity confers worldly power on his son, who is to maintain the glory of his race, foreseeing that I was destined to maintain the glory of *Saddhammo* said, ' He will be that person.' By such an unprecedented act of preference, has he exalted me :' and bearing in mind the reflection, that it was by this pre-eminent token of gratifying distinction that he rewarded him, the venerable MAHA'KASSAPO created in the bhikkhus an earnest desire to hold a CONVOCATION on *Dhammo*, and *Winayo*.

Thereafter he assembled the bhikkhus, and delivered an address to them, commencing with the words ;—" Beloved ! on a certain occasion, when with a great

* Priest, alluding to BUDDHO.

† Literally " hempen robes rejected as rubbish," the history of these robes cannot be given in the space of a note.

concourse of five hundred bhikkhus, I reached the high road at *Kasinágra* (the capital of) *Páva.*" For the particulars (of this discourse) the section regarding *Subhaddo* must be referred to. The import of that section we can discuss at the conclusion of the *Parinibbánan Suttan.*

In a subsequent part (of his address) he (KASSAPO) said—" Well then, beloved, let us have a rehearsal of (or CONVOCATION on) both the *Dhammo* and the *Winayo.* In aforetime (during the dispensation of former Buddhos) also (whenever) *Adhammo* shone forth, *Dhammo* ceased to possess the ascendancy; (whenever) *Awinayo* shone forth, *Winayo* lost ground; also in aforetime (whenever) the professors of *Adhammo* attained power, the professors of *Dhammo* became insignificant; whenever the professors of *Awinayo* attained power, *Winayo* lost ground."

The bhikkhus replied, " In that case, lord! select the théros and bhikkhus" (who should form the CONVOCATION).

The théro (MAHA'KASSAPO) setting aside the hundreds and thousands of bhikkhus who although having acquired a knowledge of all the nine *angas* of the religion of the divine teacher, were still only *puthujjaná**, and had only attained the *Sótápatti*, *Sakadágámi*, *Anágámi* and the *Sukkhawipassaná*, selected five hundred, minus one, sanctified bhikkhus who had achieved the knowledge of the *Tépitákan*, with the whole of its text and subdivisions; had arrived at the condition of *Patisambhidá*; were gifted with supernatural power; who had been, on many occasions, selected by BHAGAWA' himself for important ministries, and who were masters of the component parts of the *Téwijjá.*

In a certain passage, it is thus recorded, " thereafter the venerable MAHA'KASSAPO, selected five hundred, minus one, *arahantá.*"

On what account was it that the théro made this reservation of one?

It was for the purpose of reserving a vacancy for A'NANDO.

It is also said on this subject: " Whether with or without that venerable personage the rehearsal of *Dhammo* could not be effected."

That venerable individual having yet to fulfil his destiny, and to perfect his works of sanctification: for that reason " with him, it is impracticable."

It having (on the other hand) been also said " there was not a single *suttan gáthá*, &c. propounded by the being gifted with the ten powers (BUDDHO) of which he (A'NANDO) was not a personal witness, for he (A'NANDO) himself has declared, 'I have derived from BUDDHO himself eighty-two thousand, *(Dhammá)* from the priesthood two thousand: these are the eighty-four thousand *Dhammá*, which are to be propagated by me.' On this account, without him (the CONVOCATION) could not have been held. Hence, though he was a personage who had not yet fulfilled his destiny (by the attainment of *arahat* sanctification) being nevertheless of the greatest utility in the CONVOCATION on *Dhammo*, he was considered worthy of being selected by the théro (MAHA'KASSAPO)."

From what cause was it then that he was not selected?

That A'NANDO might escape the reproaches of other (priests, that though they had attained the *arahat* sanctification they were excluded from the CONVOCATION).

The théro (MAHA'KASSAPO) bore the most confiding affection for the revered A'NANDO: for instance, even when his hair had grown grey, addressing him as a lad would be caressed he would say, " this child has yet to learn his destiny."

* Uninspired mortals.

He (A'NANDO) was a descendant of the *Sákya* race, and the brother (cousin-german) of *Tathágato**, being the son of his father's (SUDDHODANO'S) younger brother (DOTO'DANO). Hence, lest some of the bhikkhus prejudiced to a degree to consign them to the *Chhanda-agati*, should raise the imputation that "while there are many who had fulfilled their destiny and were *patisambhidá* (the state of perfect arahathood) setting them aside, the théro selects A'NANDO, yet imperfect as to his ultimate sanctification;" (on the one hand) averting such an accusation, and, (on the other,) as the CONVOCATION could not have been held without A'NANDO, he resolved "it is only with the concurrence of the bhikkhus themselves that I will include him," and abstained from selecting him.

Thereupon the bhikkhus of their own accord made a supplication to him on account of A'NANDO. The bhikkhus thus addressed the venerable MAHA'KASSAPO: "Lord! this revered A'NANDO having attained a certain extent of sanctification is not liable to the (four) *agati*, viz.: *Chandó, dósó, bhayan* and *Móhá:* and from the circumstance of both the *Dhammo* and *Winayo* having been fully acquired by him, by his personal communion with BHAGAWA', therefore, O lord! let the théros select the said revered A'NANDO also." Thereupon the venerable KASSAPO did elect the said revered A'NANDO. Then together with this venerated person the (selected) théros became five hundred in number.

To these théros this question presented itself: "Where shall we hold the CONVOCATION on *Dhammo* and *Winayo?*"

The decision whereon was;—"*Rájagaha* is a most opulent city, full of religious edifices: it will be most proper that at *Rájagaha* we should keep our *wasso*†, as well as hold the CONVOCATION on *Dhammó* and *Winayo:* and that no other priest should resort to *Rájagaha* for the *wasso.*"

For what reason was it that it was so resolved?

In order that no individual of the hostile party should interrupt this *thawara-kammá* (act of ours which is to be effective for ages) by his intrusion in the midst of the CONVOCATION.

The venerable KASSAPO, then explained himself thus by a *kammawáchan*, which followed, or was to second to the *natti.*

"Revered! let the priesthood attend to me. This is the sacred season appropriate to the priesthood. The priesthood have to decide whether these five hundred bhikkhus, keeping their *wasso* at *Rájagaha* should hold a CONVOCATION on *Dhammo* and *Winayo*, and whether it should be permitted to any other bhikkhus to keep the *wasso* in *Rájagaha.* This is the *natti.*"

The *kammawáchá* is this.

"Revered! let the priesthood attend to me. The priesthood does decide that these five hundred bhikkhus, keeping their *wasso* at *Rájagaha* should hold a CONVOCATION on *Dhammo* and *Winayo*, and that it shall not be permitted to any other priests to keep *wasso* in *Rájagaha.* To each individual revered personage to whom the selection of these five hundred bhikkhus, for the purpose of holding a CONVOCATION on *Dhammo* and *Winayo* at *Rájagaha*, keeping the

* One of the appellations of Buddho, derived from *Tatha ágato*, literally "who had come in like manner," i. e. like the other Buddhos.

† The rainy season "from August to November, during which period the pilgrimage of Buddhist priests are enjoined to be suspended."

wasso there, or the prohibition of keeping *wasso* at *Rájagaha* by any other bhikkhus, may appear proper, let him remain silent: to whomsoever (the decision) may not be acceptable, let him speak out."

"By (the silence of) the priesthood it is decided that these five hundred priests are selected, for the purpose of holding a CONVOCATION at *Rájagaha*, keeping the *wasso* there, and interdicting all other bhikkhus from keeping *wasso* in *Rájagaha*. To the priesthood (this arrangement) is acceptable; on that account alone they are silent. I shall act accordingly."

This *kammawáchá* took place on the twenty-first day after the *parinibbánan* of *Tathágato*. BHAGAWA' expired on the full moon day of the month *Wésákho* at dawn. For seven days they made offerings of aromatic drugs, flowers, &c To these seven days were given the appellation "*Sádhukílanadiwasa*" (joyous. festival days). From that period for seven days, (i. e. during the second week,) the fire (applied) to the funeral pile would not ignite. For (the last) seven days (the cremation having been at length effected) having lined the *santhágára* hall (at *Kusinárá*) with lances, making it resemble the grating of a cage, they held a festival of offerings to his *dhátu* (relics.)

At the lapse of twenty-one days on the fifth day of the increasing moon of the month *Jettho* the relics were divided for distribution.

On this very day of the distribution of the *dhátu*, to the assembled priesthood, (MAHA'KASSAPO) imparting the reproach made by SABHADDO who was ordained in his dotage, and proceeding to make his selection of bhikkhus in manner above detailed, adopted the aforesaid *kammawáchá*.

Having recognized this *kammawáchá* the théro (MAHA'KASSAPO) thus addressed the bhikkhus. "Beloved, ye have leisure now for forty days. After that it will not be permitted to plead 'we have such and such excuses.' On that account, in this interval, whether it be an excuse in reference to any person being ill, an excuse in reference to your preceptor or ordaining superior, or in reference to your mother or father, or getting a refection dish, or a robe made, setting all such excuses aside, complete whatever requires to be done."

The *Aṭṭhakathá* then proceeds to state that in that interval the théros dispersed in different directions, for the purpose of consoling the population of India, afflicted at the death of BUDDHO: MAHÁKASSAPO, repairing to *Rájagaha* and A'NANDO to *Sáwatthi*; and at the appointed time reassembled at *Rájagaha*. The narrative is thus resumed.

They on the day of the full moon of *Asálhi*, having held an *upósatho* (at *Rájagaha*); on the first day after the full moon, assembling together commenced to keep their *wasso*.

At that period there were eighteen great *wiháros* environing *Rájagaha* and they were all filled with rubbish which had fallen into, and accumulated in them*, (during the absence of the bhikkhus.) On account of the (approaching predicted) *parinibbánan* (of BUDDHO), all the bhikkhus, each carrying his own refection dish and robe, and abandoning their *wiháros* and *parivénos* had departed.

* It will be subsequently seen that this congregation around BUDDHO took place three months before his predicted death. The wiháros at this period, therefore, had been left unoccupied for three months before, and sixty-one days after his death.

It is also recorded (in the Singhalese *Aṭṭhakathá*) that the théros then forming a *katikáwattán* (compact) together, came to the following resolution for the purpose of rendering adoration to the word of BHAGAWA', as well as for the purpose of overcoming the doctrines of the *Titthiyá* (heretics or professors of foreign faiths)—"Let us devote ourselves to the reparation (of the sacred edifices). The *Titthiyá* may say, 'the pupils of the priest GOTAMO kept up their wiháros while their teacher was alive: on his death they have abandoned them'—they (the théros) apprehended this reproach." They also thus resolved in order that they might refute another reproach, viz: "the enormous wealth bestowed by the great (in founding Buddhistical edifices) is lost."

Having formed this determination they (the five hundred selected bhikkhus) entered into a *katikáwattan*. It is thus mentioned in the *Punchasatikakkhandakan* of the *Pitakattayan*. "Thereafter, the théros thus said (one to another): 'Beloved, the reparation of dilapidations is commended by BHAGAWA'. Wherefore, let us employ ourselves in the first month in repairing dilapidations; in the middle month*, assembling together we will hold a CONVOCATION on the *Dhammo* and *Winayo*.'"

On the second day, repairing to the palace gate, they took their station there. The rája (AJA'TASATTU) approaching them and bowing down inquired: "Lords! why have ye come?" and asked if there was any thing required which could be provided by him. The théros replied, "artificers, for the purpose of effecting the repair of dilapidations at the eighteen great wiháros." The rája provided them with artificers.

The théros having completed the repairs in the course of the first month, thus reported to the rája. "Mahá rája! the repairs of the wiháros being completed, we will now hold the CONVOCATION on *Dhammo* and *Winayo*." "Most excellent, (replied the mahá rája,) ye may rely on me, let the executive part devolve on me, and the religious portion on you. Command me therefore, lords! what can I provide?" "Mahá rája! a place of assembly for the théros who are to hold the CONVOCATION." "Where lords! am I to provide it?" "It will be proper to do so at the entrance to the *Sattapanni* cave on the side of the *Webhára* mountain." Replying, "Willingly lords!" The rája AJA'TASATTU, causing to be prepared a hall, as if executed by the (celestial artificer) *Wissakamwo*, having exquisitely constructed walls, pillars, and flights of steps, embellished with representations of festoons, of flowers and of flower-creepers, rivalling the splendour of the decorations of his palace, and imitating the magnificence of the mansions of the dewos, the abode itself of the goddess SIRI (splendour), attracting the gaze of dewos and men, as a solitary pond (in a desert) attracts the feathered tribe, the accumulated repository of the admiration of the world, perfected it with every procurable precious material, and having the same decorated with suspended festoons of flowers, beautiful curtains so light that they floated in the air, like unto the palace of BRAHMA', the interior of which is depicted with rubies, with garlands of flowers and exquisitely finished; having also several stories; and further, in that hall, causing to be raised for the five hundred priests, five hundred invaluable and appropriate carpetted seats, as well as the *therásanan* (the chief théro's pulpit) on the southern side facing the north, and

* Of the three months of "*Wasso*."

the *Dhammásanán* (preaching pulpit) in the centre of the hall facing the east, fitted for the sanctified BUDDHO himself; and thereon placing an ivory fan,—sent this message to the priesthood: "Lords! my task is performed."

On that day, some of the priests made this remark concerning the revered A'NANDO. "In this congregation of priests there is a certain bhikkhu who goes about diffusing a pestilential odour." The théro A'NANDO on hearing this, felt deeply mortified, and said (to himself) "in this congregation of bhikkhus there is no priest who goes about diffusing a pestilential odour. Most assuredly, these persons speak thus in reference to no other than to me." Others again said: "Revered! the CONVOCATION is to-morrow, but as thou art deficient in the perfection (of the state of arahathood) and hast still thy allotted task to accomplish; on that account, it will not be fitting for thee to attend the meeting, do not procrastinate therefore (to perfect thyself)." The revered A'NANDO thereupon thus (meditated): "the meeting is to-morrow: should I, who am defective in sanctification, repair to the assembly to-morrow, it would be highly unbecoming." Spending the greater part of the night in meditation on the *káyagatásatiyá*, towards dawn, he descended from the peripatetic hall of meditation; and retired into the wiháro, saying, "I will repose myself." He was in the act of reclining, but before his head could touch the pillow, in that precise instant, his mind extricated itself from the dominion of sin, being the condition of subjection to transmigration, (i. e. attained arahathood.)

This A'NANDO, after having past thus the greater part of the night in peripatetic meditation still apprehended that he was incapable of attaining the perfection of sanctification. "Most assuredly, (said he) BHAGAWA' himself has said to me: 'A'NANDO! thou art a pious person: by perseverance perfect thyself: thou wilt shortly become sanctified!' a declaration of BUDDHO admits of no qualification. My own exertion must be over-anxious. By that procedure my mind evinces a vacillation, (implying a mistrust of the prediction) let me therefore repress my over-anxiety to the proper bounds." Descending thereupon from the peripatetic hall, he repaired to the place provided for washing the feet. Having washed (his feet) there, he entered the wiháro, and seating himself on his bed, he said "let me rest myself for a moment." In the act of throwing his body on his couch, his feet just raised from the ground and before his head reached the pillow, in that interval, his mind emancipated itself from the dominion of sin. The attainment of arahathood of this théro was effected therefore exempted from the four *iriyápatha*. From this circumstance, whenever it may be asked "What bhikkhu has ever attained arahathood neither reclining, nor sitting, nor standing, nor walking?" it will be proper to reply: "A'NANDO théro did."

On the second day, being the fifth of the (increasing) moon, the priests having made their meal, and safely laid aside their *pátrá* (refection dishes) and (extra) robes, assembled at the hall of the DHAMMA CONVOCATION.

The théro A'NANDO, who had attained the arahathood, also repaired to the meeting. "How did he go?" saying to himself, "Now I am qualified to enter into the midst of the assembly" with the greatest delight, adjusting his robe so as to leave one shoulder bare, he presented himself, like unto a palmira nut detached from its stalk; like unto a ruby enfolded in a red shawl; like unto the full moon risen in the cloudless sky; like unto the flower expanding its

pollen and feathered leaf, warmed by the ray of the morning sun,—as if proclaiming the attainment of the sanctification of *arahat*, by the extreme sanctity, purity, brilliancy and splendour of his own countenance.

On beholding him, this reflection occurred to the venerable MAHA'KASSAPO. "Surely this beloved A'NANDO has attained *arahathood*: if the divine teacher had been alive he would most certainly have greeted A'NANDO with '*sádhus*;' let me therefore welcome him with the '*sádhus*' which would have been bestowed on him by the divine teacher:" and he greeted him three times with "*sádhu*!"

The *Majjhima-bhánaká* (priests who had learned to rehearse the *Pitakattayan* only as far as the *Majjhimanikáyo*) remarked "A'NANDO théro in order that he may indicate his attainment of the arahathood makes his appearance unattended by (other) priests."

The bhikkhus according to their seniority ranged themselves, each on his own appropriate seat, leaving A'NANDO'S place unappropriate: and seated themselves.

On some of them inquiring "Whose seat is this?" "A'NANDO'S" was the reply; and "Where is he gone to?" At this instant, the théro thus decided, "this is the moment for my entrance," and for the purpose of manifesting his own *bháwanán* (sanctified state) diving into the earth, exhibited himself in the pulpit reserved for himself. Some again say, he came through the air and took his seat. Be it this, or be it that, having most fully satisfied himself that it was he, the greeting conferred on him by the venerable MAHA'KASSAPO was most proper.

On the arrival of this revered personage the théro MAHA'KASSAPO thus addressed the priesthood:—

"Beloved! which shall we rehearse in convocation first, the *Dhammo* or the *Winayo*?"

The bhikkhus replied: "Lord! MAHA'KASSAPO! it is the *Winayo* which is the life of the *sásanán* of BUDDHO. When *Winayo* is at an end, *sásanán* is at an end. Therefore let us rehearse the *Winayo* first."

"Making whom the Chief?"

"The venerable UPA'LI."

"Why,—would not A'NANDO be worthy?"

"Not that he is not worthy; but because while the omniscient BUDDHO himself was living, on account of his knowledge of the text of the *Winayo*, he had conferred that office on the venerable UPA'LI, saying 'Bhikkhus, of my disciples, who are the sustainers of *Winayo*, the aforesaid UPA'LI, is the chief:' on that account, let us rehearse the *Winayo* receiving it from the théro UPA'LI."

Thereupon the théro (MAHA'KASSAPO) for the purpose of interrogating on *Winayo*, assigned to himself that task; and the théro UPA'LI was appointed for the purpose of expounding it.

This was the text there (the proceeding in CONVOCATION). The venerable MAHA'KASSAPO thus addressed the priesthood: "Beloved! let the priesthood attend to me. This is the appointed time (for the CONVOCATION): I am about to interrogate UPA'LI on the *Winayo*." The venerable UPA'LI also addressed the priesthood. "Lords! let the priesthood attend to me. This is the time appointed for the priesthood; interrogated on the *Winayo*, by the venerable MAHA'KASSAPO, I am about to propound it."

Having thus imposed on himself that office, the venerable UPA'LI rising, adjusting his robe so as to leave one shoulder bare, and taking up the ivory-wrought fan, and bowing down to the senior priests, took his seat on the *Dhammásanan* (before described).

Thereupon the théro MAHA'KASSAPO taking his seat on the *Thérásanan* interrogated the venerable UPA'LI on *Winayo*.

"Beloved UPA'LI! where was the first *Párájikan* propounded?"

"Lord! at *Wesáli*."

"Who gave occasion to it?"

"It originated in reference to (the priest) SUDINNO, a *Kálanda* youth."

"On what account?"

"On account of his committing fornication."

The venerable MAHA'KASSAPO then interrogated the venerable UPA'LI on the contents of *Paṭhaman Párájikan*, its origin, the party concerned, the exhortation made, the sequel or application of the exhortation, and the result as to the conviction or the acquittal. The venerable UPA'LI, who had been interrogated on each of these points, explained (them).

"Is there or is there not (resumed MAHA'KASSAPO) in reference to this *Paṭhaman Párájikan* any thing either to be omitted, or to be added."

"There is nothing in the words of the sanctified BUDDHO which ought to be omitted. The *Tathágatá* utter not a single unmeaning syllable. In the words however of the dewos and of the disciples of BUDDHO there may be that which should be omitted.

The théros who held the DHAMMO CONVOCATION rejected that (which should be omitted), that which was to be added was to be found in all parts, accordingly whatever was requisite to be added in any part, they did introduce the same.

"But what was that?" either "at that period" or "at that particular period," or "thereafter" or "on his having so said," or "he thus spoke," and other similar expressions, only requisite for the connection of the sense. Having thus introduced that which was requisite to be added, they concluded this *Paṭhaman Párájikan*.

While the *Paṭhaman Párájikan* was in progress of rehearsal in CONVOCATION (by MAHA'KASSAPO and UPA'LI, the rest of) the five hundred *arahantá* who were selected for the CONVOCATION, chaunted forth the same, passage by passage. At the very instant their chaunt commenced with the words "the sanctified* BUDDHO dwells in *Wéranjá*," the great earth as if offering up its "*sádhus*" quaked from the abyss of the waters under the earth.

They, in the very same manner, having gone through the (four) chatán *Párájikáni* ordained that that (portion of the *Pitakattayan*) should be called "*Párájikakandan*" (section).

The thirteen *Sanghádisésá* they ordained should be called the "*Térasakan*."

The first two *Sikkhá*, they ordained should be called "*Ariyatáni*."

The next thirty *Sikkhá*, they ordained should be called the "*Nissaggiyá Páchittiyáni*."

(These four constitute the "*Párájika*.")

* The opening of the text of the *Paṭhama Párájikan*.

The next ninety-two *Sikkhá* they ordained should be called the "*Páchittiyáni.*"

The next four *Sikkhá*, they ordained should be called the "*Patidásaniyáni.*"

(These two constitute the *Páchittiyan).*

The next seventy-five *Sikkhá*, they ordained should be called "*Sekhiyáni.*"

The seven *Dhamma* they ordained should be called "*Addhikarana-samathá.*"

(These two constitute the *Chúlawaggo).*

Thus authenticating these two hundred and twenty *Sikkhá*, they ordained that they should constitute the "*Maháwibhango.*" At the completion of the *Mahá-wibhango*, as in the former instance, the great earth quaked.

They then resolved that the first eight *Sikkhápadáni* in the *Bhikkhuni-wibhango* should form the "*Párajikáni*" (of the *Bhikkhuniwibhango*).

The (next) seventeen *Sikkhápadáni*, they constituted the "*Sattarasakan.*"

The next thirty *Sikkhápadáni* they constitute the *Nissaggiya-Páchittiyáni.*

The (next) one hundred and sixty-six *Sikkhápadáni* they constituted the "*Páchittiyáni*" (of the *Bhikkhuni-wibhango).*

The next eight *Sikkhápadáni* they constituted the "*Pátidesaniyáni.*"

The (next) seventy-five *Sikkhápadáni*, they constituted the "*Sekhiyáni.*"

The seven *Dhammá* they constituted the *Adhikaranasamathá.*

Thus authenticating these three hundred and four *Sikkhápadáni** as the *Bhikkhuni-wibhango*, they decided that this *ubhato-wibhango* (double *wibhango*) should be divided into sixty-four *Bhánawárá*†. At the termination of the *Ubhato-wibhango* as before described, the great earth quaked.

In the same manner having rehearsed in convocation, the "*Khandhakan*" (also called *Maháwaggo*) containing eighty *Bhánawárá*; and the "*Páriwárán.*" containing twenty-five *Bhánawárá* they constituted this, "*Winayo-Pitakán.*" At the conclusion of the *Winayo-Pitakan* also, as before stated the earth quaked. They consigned the same to the venerable UPA'LI himself, saying "expound this to thy pupils."

At the termination of the CONVOCATION on the *Winaya-Pitakán*, the théro UPA'LI laying aside the ivory fan, and descending from the *Dhammásanan* and bowing down to the priests senior (to himself), resumed his place on the seat individually prepared for him.

The CONVOCATION on *Winayo* having terminated the venerable MAHA'KASSAPO desirous of holding the CONVOCATION on *Dhammo*, thus addressed the bhikkhus.

"What individual is most fit to be appointed the chief of the CONVOCATION on *Dhammo*, by the members of this CONVOCATION?"

The bhikkhus replied "Appoint the théro A'NANDO the chief."

Thereupon the venerable MAHA'KASSAPO thus explained himself to the priesthood: "Beloved! let the priesthood attend to me. This is the appointed

* These *Sikkhápadáni* are dispersed through all the five books of the *Winayo.*

† A "*Bhánawárá*" consists of 250 gathas, of four pádáni, each pádán containing eight syllables; the same computation is used in prose also.

Syllable.		Pádán.		Gátha.	Bhánawáro.
8	=	1		,,	,,
32	=	4	=	1	,,
8000	=	1000	=	250	1

time for the priesthood (to hold their CONVOCATION). I am about to interrogate A'NANDO on *Dhammo*."

The revered A'NANDO then addressed the priesthood. "Lords! let the priesthood attend to me. This is the appointed time for the priesthood, interrogated by the venerable MAHA'KASSAPO, I am about to expound the *Dhammo*."

The venerable A'NANDO then rising from his seat, and adjusting his robes so as to leave one shoulder bare, and bowing down to the senior bhikkhus, took his place in the *Dhammásanan*, holding up the ivory-wrought fan.

The venerable MAHA'KASSAPO next asked, "Beloved! which *Piṭako* shall we rehearse first?"

"Lord! the *Suttantá Pitako!*"

"In the *Suttanta Piṭáko* there are four *Sangítiyó*; which among them the first?"

"Lord! the *Díghasangíti*."

"In the *Díghasangíti*, there are thirty-four *Suttáni*, composing the three *Waggá*, among them which *Waggo* first?"

"Lord! the *Silakkhanda-waggo*."

"In the *Silakkhanda-waggo*, there are thirteen *Suttantá*, which *Suttan* first?"

"Lord! the *Brahmajála-suttan*."

"Let us then rehearse first that *Suttan* which is embellished with the three *Siláni*, which triumphed over the various heretical faiths, sustained by hypocrisy and fraud; which unraveled the doctrinal tissue of the sixty-two heterodox sects, and shook the earth together with its ten thousands component parts."

Thereupon the venerable MAHA'KASSAPO thus addressed the venerable A'NANDO.

"Beloved! A'NANDO! where did (BUDDHO) deliver the *Brahmajálan?*"

"Lord! between *Rájagata* and *Nálanda*, in the palace situated in the *Ambalitthiká* (mango grove.)"

"Who gave rise to it?"

"SUPPIYO, the *paribbájako*, and the youth BRAHMADATTO."

"What was the subject?"

"The praise of virtue."

The venerable MAHA'KASSAPO then inquired of the venerable A'NANDO the origin of the *Brahmajálan*—the individual concerned, and the subject.

The venerable A'NANDO explained them. At the termination of his exposition, the five hundred arahanta chaunted it forth, and as described in the former instance, the earth quaked.

Having thus rehearsed the *Brahmajálan*, then in succession, together with the *Brahmajálan*, all the thirteen *Suttáni* having been rehearsed in the prescribed form of interrogation and explanation, viz: "Beloved A'NANDO! where did (BUDDHO) deliver the *Samánnaphalan suttán*," and authenticated the same, they called that portion the "*Silakkhandawaggo*."

Having then rehearsed *Maháwaggo*, and lastly the *Pátiwaggo* and thus completing the rehearsal of the three *Wagga* comprising the thirty-four *Suttáni*, amounting to sixty-four *Bhánawárá* of the text; and calling the same (collectively) the *Díghanikáyo*, they consigned the same to the charge of the venerable A'NANDO, saying, "Propound this to thy pupils."

In the next place, holding their CONVOCATION on the *Majjhima-nikáyo* amounting to eighty *Bhánawárá*, they consigned the same to the disciples of the (deceased) SA'RIPUTTO, the chief minister of *Dhammo*, saying, "Charge yourselves with, and propound, this."

In the next place, holding their CONVOCATION on the *Sangutta-nikáyo*, amounting to one hundred *Bhánawárá*, they consigned the same to MAHA'KASSAPO, saying, "Lord! propound this to thy pupils."

In the next place (lastly) holding their CONVOCATION on the *Anguttra-nikáyo*, amounting to one hundred and twenty *Bhánawárá*, consigned the same to the théro ANU'RADDHO, saying, "Propound this to thy pupils."

The *Dhámmasangáni-Wibhangan*, *Katháwatthun*, *Puggalán-Dáthuyamakan* and *Patṭhánan*, (compose that which) is called the "*Abhidhammo*." Having thus held a CONVOCATION on (this portion of) the text, the universally lauded aliment of refined wisdom, the five hundred *arahantá* chaunted forth (its title) calling it the "*Abhidhamma-piṭako*" as before described, the earth quaked.

Thereafter the *Játakan*, *Mahániddéso*, *Chúlaniddéso*, *Paṭisambhidámaggo*, *Suttanipáto*, *Dhammapadan-udánan*, *Itiwuttakan*, the *Wimára* and *Pétawatthú*, as well as the *Théra* and *Théri-gáthá* having also been rehearsed, as a portion of the text, and having given it the name (collectively) of *Khuddagantho*, the *Dighabhánaká* priests assert, that they were included in the CONVOCATION, in the same *Abhidhammo*, while the *Majjhimabhánaká* priests maintain that together with the *Chariyápitakan*, *Apadánan* and *Buddhawanso*, the whole of the *Khuddaganthó* were included in the *Suttantapiṭako*.

Thus, the whole word of BUDDHO by its (rasó) design is "one single class;" by its division into *Dhammo* and *Winayo* consists of "two classes;" by its division into first, middle and last, as well as by its division into the (three) *Piṭakáni*, of "three classes;" by its division into *Nikáya'* of "five classes;" by its division into *Angáni* of "nine classes:" and by its division into *Dhammakhandá* of "eighty-four thousand classes."

Why is it, by its "*design*," one single class?

Because from the moment the supreme omniscient buddhohood was attained by BHAGAWA', till by his having terminated the course of transmigration, he achieved final extinction by his *nibbánan*, in which interval a period of forty-five years elapsed, all that was said (by him) whether to déwos, men, *nága* or *yakkhá* as well monitory as illustrative, had but "one single design," the end being supreme beatitude. Thus, by its "design," it is "one single class."

Why does it by the *Dhammo* and *Winayo* division, consist of "two classes?"

The whole being divided into, and called "*Dhammo*" and "*Winayo*," numeral computation (makes it so); the *Winaya-piṭakan* (alone) composes the *Winayo*; the rest of the word of BUDDHO is denominated *Dhammo*, as well as for the reason that he (MAHA'KASSAPO) had said, "It would be most proper that we should hold a CONVOCATION on *Dhammo* and *Winayo*; that I should interrogate UPA'LI on *Winayo*, and that I should interrogate A'NANDO on *Dhammo*.' Thus by the division into "*Dhammo* and *Winayo*," it consists "of two classes."

Why does it by the division into first, middle, and last, "consist of three classes?"

Because the whole consists of three divisions, viz: the first words of BUDDHO, the middle (or central) words of BUDDHO, and the last words of BUDDHO.

The following are the first words of BUDDHO* :

Anékajátisansáran sandháwessan anibbisan
Gahakárakan, gawésanto dukkhájátis punappunan ;
Gahakáraka ! ditṭhósi : punna géhan na káhasi ;
Sabbáté phásuká bhaggá ; gahakútan wisankhitan ;
Wisankhara-gatan chittan, tanhánan khayamajjágá !

" Performing my pilgrimage through the *(sansáró)* eternity of countless existences, in sorrow, have I unremittingly sought in vain the artificer of the abode (of the passions) (i. e. the human frame). Now O artificer ! art thou found. Henceforth no receptacle of sin shalt thou form—thy frames (literally ribs) broken ; thy ridge-pole shattered ; the soul (or mind) emancipated from liability to regeneration (by transmigration) has annihilated the dominion of the passions."

These are the " first words of BUDDHO."

There are some persons who maintain, that the *gáthá* commencing with the words, *Yadá havé pátu-bhawanti dhammá* " most assuredly in due course the *dhammá* will descend (be revealed)" which are in the *Khandhó* (section) were also a part of the hymn of joy composing the first words of BUDDHO.

This *gáthá* of joy of him who had attained the state of omniscience, by his own felicitous intelligence, and who had watched the progress of the *Pachayákaran* be it understood, was delivered on the day after the full moon.

What he (BUDDHO) said at the moment he was passing into *parinibbánan* (reclining between the two sal-trees at *Kusinára*, on the full moon day of the month *Wésákо,—Handadáne, bhikkhawé ! ámantayámi wó ; wiyadhammá sankhárá appamádéna sampádétha.* " Now, O *bhikkhus !* I am about to conjure you (for the last time) : perishable things are transitory : without procrastination earn *(nibbánan)*." These were his " last words." Whatever has been said by him between those two are his " middle words." Thus by the classification into " the first," " the middle," and the " last words," it consists of " three classes."

How does it by the *Piṭaka* division, become the " three *Piṭaka*."

The whole being divided into the *Winayo-Suttantá* and *Abhidhammo*, becomes three sections. Including therein both what was and† what was not authenticated in the FIRST CONVOCATION,—viz. the two *Pátimokkhání*—the two *Wibhangáni*, the twenty-two *Khandakhá*, and the sixteen *Pariwárá*. This (portion) was called the " *Winaya-Piṭako*."

The collection of thirty-four *Suttantá* commencing with the *Brahmajálan* is the " *Dighanikáyo*."

The collection of one hundred and fifty-two *Suttantá*, commencing with the *Múlapariyáya* is the " *Majjhimanikáyo*."

The collection of seven thousand seven hundred and sixty *Suttantá*, commencing with the *Oghakarana suttan*, is the " *Sanguttanikáyo*."

The collection of nine thousand five hundred and fifty-seven *suttantá*, commencing with the *Chittapariyádánan* is the " *Anguttaronikáyo*."

* Uttered at the instant of his attaining buddhohood under the bo-tree at *Uruwéla*, now Buddhagayá.

† Adverting to the few explanatory words which were added, as before described, for the connection of the sense of the text.

The *Khuddakanikáyo* consists of fifteen sections, by being divided into *Khuddakapátan, Dhammapadan, Udánan, Ittuwattakan, Suttanipátan, Wináyawatthú, Pétawatthu, Théragáthá, Thérigáthá, Játakan, Widdéso, Patisambhidá, Apadánan, Buddhawanso* and *Chariyápitako.*

This is called "*Suttanta Pitako.*"

The *Dhammasangho,* the *Wibhango, Dhátukathá, Puggalo, Kathawattu, Yamakan* and *Patthánan.* These were called the "*Abhidammapitako.*"

In regard to the *Winayo,* it is said, *Wiwidha wisésanayattá; Winayanatochéwa káyawáchánan winayatthawidúhi ayan Winayo "Winayóti" akkháto.*

This *Winayo,* is called "*Winayo*" by those versed in the *Winayo,* because it comprises various conflicting doctrines as well as controls the acts and words of men. "Various" because the *Pátimokkhá* comprises five classes of *Uddéso* and the *Párájiko* is only the first of a collection comprising the seven *A'patti.* It has (separate) *Mátika* (indexes) containing conflicting rules in the *Wibhango* and other sections, as well as "subsequent" or "supplementary" rules of opposite tendencies, both of increasing strictness and of modifying laxity. Moreover, from its prescribing rules for controling the misconduct of men, in deed as well as in word, it thence "controls the acts and words of men," and on that account, it being both "various" and "conflicting" and as it "controls deeds and words," it is called "*Winayo.*" For this reason this designation was adopted as expressive of its contents.

In regard to the *Suttáni,* it is said :—

Itaranpana, Atthanan, súchanato; súwattato pasawanatóthá, súdanato, suttáná suttasabhágatocha suttan, "suttanti" akkhátan.

The next: the *suttan* is called *suttan* from its precise definition of rights; from its exquisite tenor; from its collective excellence, as well as from its overflowing richness; from its protecting, (the good) and from its dividing, as if with a line.

Here, "It precisely defines" by its distinguishing one's own rights from those of other persons. "It has an exquisite tenor" from its having been propounded in a strain profitable to those subject to the control of *Winayo.* It is stated, that it possesses "collective excellence" because it collects together its contents, like a harvest-produce is gathered. It is said "it overflows" because it is like unto the milk streaming from a cow. It is said "it protects" because it is a safe-guard. It is said "it divides as with a line" because as the line (suttan) is (a mark of definition) to carpenters, so is this (suttan, a rule of conduct) to the wise. In the same manner that flowers strung together on a line are neither scattered nor lost, so are the precepts which are herein contained united by this (suttan) line.

For this reason, this designation was adopted as expressive of the nature of its contents.

In regard to the *Abhidhammo,* it is said :—

Yé ettha wuddhimantá salakkhaná pújitá, parichchhinná wuttádhi kácha dhammá; "Abhidhammo" téna akkháto.

In this case, be there any "*dhammá*" profound in import, glorious in form, celebrated by their renown, and divested of ambiguity, and worthy of being designated "*adhi,*" thence they would be called "*Abhidhammo.*" This word

'adhi' will be found prefixed to each of the foregoing (attributes of) pre-eminence, glory, celebrity and perspicuity.

(Here follow a series of quotations showing the instances in which the prefix '*Abhi*' has been so used.)

"Be it understood that those who are versed in the contents of the '*Pitakan*' (chest) from its being the *(Bhájanan)* vessel in which the text is contained, as well as from the circumstance of the *Winayo* and the rest (*Suttantá* and *Abhidhammo*) being also comprised therein, call it '*Táyo*,' *Three.*"

(Here follows another series of quotations and further explanations illustrative of the word *Piṭakan.*)

"How does it by the *Nikáyo* division become of 'five classes?'"

"The whole being divided into the *Dighanikáyo*, *Majjhimanikáyo*, *Sanyuttanikáyo*, *Anguttaranikáyo*, and *Khuddakanikáyo*, it becomes of five classes.

"It is recorded (in the former *Aṭṭhakathá.*)

"To that (book) which contained thirty-four *Suttantá* composing three *Waggo*, being the first compiled, the name '*Dighanikáyo*' was given."

"From what circumstance did it obtain the name of *Dighanikáyo?*"

"It is called '*Dígha*' (long) from its containing a collection of the long *Suttantá*; and *Nikáyo* from its being an 'assemblage' of numerous (*Suttantá*), for instance it is said of the word *Nikáyo*, 'O bhikkhus! never have I beheld a single "*Nikáyo*" like that of the thoughts, nor O bhikkhus! a "*Nikáyo*" like that of the animal creation, nor like that of the physical world.' In these various ways, both in sacred and profane language, is this word applied. In reference to the other *Nikáyo* also, the same construction is to be placed on the word '*Nikáyo.*'"

"Why is it called the *Majjhimo Nikáyo?*"

"It is a *Nikáyo* composed of one hundred and fifty-two *Suttantá* of *(Majjhimo)* middling or moderate length, commencing with the *Suttan* called the '*Múlapaniyáya,*' and classified into fifteen *Waggo.*"

"Why is it called the *Sanyutta Nikáyo?*"

"From its being *(Sanyutta)* classed together under different heads, commencing with the *Dewatá-Sanyuttan*, containing the *A'ghataranan* as the first *Suttan* (of that *Sanyuttan)*, and comprising altogether seven thousand seven hundred and sixty-two *Suttantá.*"

"Why is it called the *Anguttara Nikáyo?*"

"Because it is classed *('Angatirikawaséna')* under different heads, (or *Angá* members,) each progressively increasing in number, the first only containing the *Chittapariyádánan*, and altogether comprising nine thousand seven hundred and fifty-seven *Suttantá.*"

"Why is it called *Khuddaká Nikáyo?*"

"Because it comprises exclusively of the four *Nikáyo* (above mentioned) all that remained of the words of BUDDHO, being the whole of the *Winayo* and *Abhidhammapiṭakan*, and the fifteen sections (of the *Suttantá*) commencing with the *Khuddapatan* as formerly explained."

"Thus by the division of *Nikáyos* they are five."

"How does it by the *Angá* division consist of nine classes?"

" The whole of the foregoing comprising in it the nine divisions are, the *Súttan, Géyyan, Weyyákaran, Gáthá, Udánan, Itiwuttakan, Játakan, Abbhutadhammo* and the *Wédattan.*

" The *Súttan* it is to be understood, contains, the two *Wibhangá* and (two) *Niddésá*, the *Khandako* and *Pariwáro*, and in the *Suttanipáto*, the *Mangalasuttan, Ratana suttan, Nálaka suttan* as well as the *Tuwataka suttan*, and all the other discourses of *Tathágato* bearing the signification of ' *Suttan.*'

" Be it understood further that the *Géyyan* contains every *Suttan* composed in *Gáthá* (metre) together with (its prose portions). The whole of the *Sanguttako* consists throughout of that description (of composition being *Gáthá* together with prose.)

" The *Wéyyákaranan* be it understood, consists of the whole of *Abhidhamma Piṭako*, the *Suttantá* not composed in *Gáthá*, and the words of BUDDHO which are not classified under any of the other eight *Angáni.*

" Be it known the *Gáthá* consists of the *Dhammapadáni, Théragáthá, Therigáthá* and those unmixed (detached) *Gáthá* not comprehended in any of the above named *Súttantá.*

" The *Udanan* be it known, consists of the eighty-two *Súttantá* delivered (by BUDDHO) in the form of hymns of joyous inspiration.

" The *Ittiwattakan*, be it understood, comprises the one hundred and ten *Suttantá* which commence with the words: ' It was thus said by BHAGAWA'.'

" The *Játakan*, be it understood, comprises the five hundred and fifty *Játakáni* (incarnations of BUDDHO) commencing with the *Appanakajátakan.*

" The *Abhutadhammo*, be it understood, comprises all the *Súttantá* containing the miracles and wonders, commencing with such expressions as ' bhikkhus.' These miraculous and wonderous *dhammá* (powers) are vouchsafed to ' A'NANDO.'

" The *Wédattan*, be it understood, consists of the *Chúlawédattan*, the *Maháwédattan*, the *Sammádditthi*, the *Sakkapanhá*, the *Sankhárabhajaniyá*, the *Mahápunnáman*, as well as the whole of those *Súttantá* which have conferred wisdom and joy on those who heard them.

" Thus by the classification into *Angáni*, it consists of nine divisions."

" How does it by the *Dhammakkhando* division consist of eighty-four thousand portions?"

" It comprises the whole word of BUDDHO. (It has been said by A'NANDO.) *Dwásitan, Buddható gantun dwésahassáni bhikkhuto, chaturásiti sahassáni yé mé dhammá pawattito.* ' I received from BUDDHO himself eighty-two thousand; and from the bhikkhus two thousand; these are the eighty-four thousand *dhammá* maintained by me.' By this explanation of the *Dhammakkhando* it consists of eighty-four thousand divisions. A *Suttan* in which one subject alone is treated (or literally consists of one joint) is called *Ekódhammakkhando.* Any *Dhammakkhando* which treats of a plurality of subjects, or consists of more than one joint, is called by the number (of these subjects treated).

" In the *Winayo* also, there is the *Watthu*, the *Mátiká*, the *Padabhajaniyan*, the *A'patti*, the *Anápatti* and the *Tikichchabhédo* classifications. In that (division) likewise, be it understood, that each class constitutes a *Dhammakkhando.*

" Thus by the *Dhammakkhando* division, it consists of eighty-four thousand parts.

" Thus this word of BUDDHO, from its being left undivided, is by its ' *design*' one single class. By its division into *Dhammo* and *Winayo*, it consists of two classes, and so forth; and having been separated and arranged by the sanctified priesthood, having MAHA'KASSAPO for their chief who held the CONVOCATION, this classification has been definitively ordained, viz. thus ' this is the *Dhammo*,' ' this the *Winayo*,' ' this the *Patamá buddha wachanan*,' ' this the *Majjhima buddha wachanan*,' ' this the *Pachima buddha wachanan*,' ' this the *Winaya pitakan*,' ' this the *Sútta pitakan*', ' this the *Abhidhamma pitakan*,' ' this the *Dighanikáyo*,' and so forth to the *Khuddhanikáyo*, ' these the *Sáttantá*,' ' these the *Angáni*,' and ' these eighty-four thousand *Dhammakkhando*.

" This was not all, for moreover, having established the further several subdivisions of classifications of *Uddánan*, *Waggo*, *Peyálan*, *Ekanipáto*, *Dakanipáto* and so forth (of *Nipatá*), the *Sanyuttan*, *Panasá*, as set forth in the three *Piṭakáni*, the CONVOCATION was closed in seven months.

" At the conclusion of this CONVOCATION or its being announced ' this religion of the deity gifted with ten powers had been rendered effective to endure for five thousand years, by the théro MAHA'KASSAPO,' from the exuberance of its exultation, as if pouring forth its ' *sadhus*' the great earth, from the abyss of the waters under the earth, in various ways quaked, (from east to west;) requaked (from north to south); and quaked again (from *Zenith* to *Nadir*); and various miracles were manifested.

" This is called the ' *Paṭima Sangíti*' (FIRST CONVOCATION). It is also (called) in this world, from its having been conducted by five hundred persons, *Panchasatiká Sangíti*, the (CONVOCATION OF FIVE HUNDRED), and because it was exclusively held by the théros, it is likewise called the THE'RIKA'."

A table of the Páli version of the Pitakattayan.

WINEYAPITAKO,

Consists of the following sections.

1. *Parájiká*, 191 leaves of 7 and 8 lines on each side, each leaf 1 foot, 10 inches long.
2. *Pachitiman*, 154 leaves of 9 and 10 lines on each side, each leaf 1 foot, 9 inches long.
3. *Chúlawaggo*, 196 leaves of 8 and 9 lines on each side, each leaf 1 foot, 10 inches long.
4. *Maháwaggó*, 199 leaves of 8 and 9 lines on each side, each leaf 1 foot, 10 inches long.
5. *Pariwáró*, 146 leaves of 10 and 11 lines on each side, each leaf 1 foot, 9 inches long.

ABHIDHAMMAPITAKO,

Consists of the following sections.

1. *Dhammasangani*, 72 leaves of 10 lines on each side, each leaf 2 feet 4 inches long.
2. *Wibhangan*, 130 leaves of 8 lines on each side, each leaf 2 feet, 4 inches long.
3. *Katháwatthu*, 151 leaves of
4. *Puggalan*, 28 leaves of 8 lines on each side, each leaf 2 feet, 4 inches long.
5. *Dhátu*, 31 leaves of 8 lines on each side, each leaf 2 feet. 4 inches long.
6. *Yámakan*, 131 leaves of 10 lines on each side, each leaf 2 feet. 4 inches long.
7. *Paṭṭhanan*, 170 leaves of 9 and 10 lines on each side, each leaf 2 feet, 4 inches long.

SUTTAPITAKO,

Consists of the following sections.

1. *Dighanikáyo*, 292 leaves of 8 lines on each side, each leaf 1 foot, 10 inches long.

2. *Majjhimanikáyo*, 432 leaves of 8 and 9 lines on each side, each leaf 1 foot, 11 inches long.

3. *Sanyuttakanikáyo*, 351 leaves of 8 and 9 lines each side, each leaf 2 feet, 2 inches long.

4. *Anguttranikáyo*, 654 leaves of 8 and 9 lines on each side, each leaf 1 foot, 10 inches long.

5. *Khudakanikáyo*, is composed of 15 books; viz.

I. *Khudapátan*, 4 leaves of 8 lines on each side, 2 feet, 4 inches long. (Burmese.)

II. *Dhammapadan*, 15 leaves of 9 lines each side, each leaf 1 foot, 8 inches long.

III. *Udánan*, 48 leaves of 9 lines each side, 8 feet long.

IV. *Itti-attakan*, 31 leaves of 8 lines each side, each leaf 1 foot, 9 inches long.

V. *Suttánipátan*, 40 leaves of 9 lines each side, each leaf 2 feet.

VI. *Wimánawatthu*, 158 leaves of 7 and 8 lines on each side, each leaf 1 foot, 9 inches long.

VII. *Pétawatthu*, 142 leaves of 8 and 9 lines each side, each leaf 1 foot, 8 inches long.

VIII. *Théragáta*, 43 leaves of 9 lines each side, 2 feet, 4 inches long. (Burmese.)

IX. *Thérigátá*, 110 leaves of 8 lines on each side, each leaf 1 foot, 7 inches long.

X. *Játakan*. The commentary is intermixed with the text, and in that form it is a voluminous work of 900 leaves.

XI. *Niddéso*, not ascertained yet.

XII. *Patisambhidan*, 220 leaves of 8 lines on each side, each leaf 1 foot, 11 inches long.

XIII. *Apadánan*, 196 leaves of 10 lines on each side, each leaf 2 feet long.

XIV. *Buddhawanso*, 37 leaves of 8 lines, each 2 feet long.

XV. *Chariyápitako*, 10 leaves of 8 lines each side, 3 feet long.

II.—*On the "Indian Boa," "Python Tigris."* *By Lieut.* T. HUTTON, *37th Native Infantry.*

It is erroneously supposed that the Boas, after having crushed their prey lubricate it with saliva for the purpose of rendering it less difficult to be swallowed.

I possessed three of these reptiles alive at one time, and frequently watched them very narrowly through the whole process of crushing and swallowing their prey, which consisted of fowls, partridges, rabbits, &c., but never did they put the least saliva on it previous to swallowing it. The mistake, however, is easily accounted for; having seized and smothered its prey, the Boa cautiously and partially unwinds the death knot he has tied round his unfortunate victim, and resting awhile as if to recover from the exertion he has undergone proceeds to measure or examine the object still held in his embrace, and during this process the tongue is constantly darting out, as he proceeds.

This, at first sight may appear to be for the purpose of lubricating the feathers or the hair of the prey, but it is in reality nothing more than feeling the way and ascertaining where the head lies.

It appears to me by no means improbable that the tongue in serpents is rendered highly sensitive, and may be deemed in a great measure the organ of touch or feeling, by which it is enabled to assist the senses of sight and smell, and so in some degree be considered analogous to the antennæ of insects*.

I am led to this belief by observing how constantly the tongue is darted out and brandished, as it were, whenever the reptile is in motion or at all disturbed.

When I offered water to the Indian Boas, of which they are very fond, they invariably darted out the tongue rapidly and repeatedly as they moved along, and seemed to feel the pan all round with it, darting it over the edge several times until it touched the water, when they immediately raised their heads, and gliding forwards dipped the nose fairly into it, and drank by long draughts.

The body in serpents is by no means so callous to the sense of feeling, as the hard protecting armour in which they are encased, would perhaps lead one to suppose; I have seen them shrink from a very slight touch. This sensitiveness, however, would not enable them to distinguish different objects, were they not furnished with some organ adapted for that purpose; that organ I suppose to be the tongue.

As the Boa swallows its prey the parts as they descend become thickly coated with glutinous saliva, but this is derived from the inside of the mouth and throat, as the prey is drawn in, and not from any previous lubrication, as may be seen by taking away the object from the snake, when it will be perceived that those parts which were in the throat and jaws, are slimy, while the remainder is quite free from saliva.

They always endeavour to seize their prey by the head, but it not unfrequently happens that in making the spring, their destined vic-

* Last year, (1836), I dipped a feather into spirits of turpentine, and then held it near the antennæ of a stag-beetle which was crawling along the table; the insect immediately withdrew the antennæ, and turned away. I repeated this several times, and always with the same result.

Another beetle very common at *Simla* during the rains and which appears to be the *Scarabæus Phorbanta* of OLIVER's insects, showed a much stronger aversion to the smell of the turpentine, withdrawing the antennæ even while the feather was at some distance, and bending down its head. This would plainly indicate the sense of smell to be in the antennæ?

tim moves away, in which case they seize anywhere they can, but having crushed it, they invariably commence at the head in swallowing it, by which means they have less difficulty in drawing in the wings and legs of animals, than if they commenced at the tail, and indeed it would be totally impossible to swallow a large bird or quadruped unless they began at the head, for the wings would open out across the mouth, and prevent the bird descending into the throat, and so would the legs of a quadruped.

As it is, they often meet with difficulty in swallowing even a moderate sized prey.

A Boa eight and a half feet long, which could swallow a large sized full grown rabbit, had often great difficulty in taking in a partridge, for if he did not begin cleverly at first in getting the body to follow the head and neck tolerably straight, i. e. if he seized it rather too much on one side, the opposite wing would not enter his mouth; but in such cases he had an infallible remedy for smoothing down the obstacle, which consisted in throwing a coil tight round his own neck, and then drawing his head, and prey backwards through it, by which means the wings were smoothed down and lengthened out, so as to be easily swallowed.

They appear to be nocturnal,—at least I judge so, from their lying coiled up all day, and moving about in the cool of the evening about nightfall.

They make a loud hissing when irritated by being touched, but otherwise emit no sound.

About the middle of November they became lazy and sluggish, and refused food when offered to them on the 1st December, although they had not been fed for a month before. From that time until the beginning of April, they refused to feed and generally remained folded coil above coil, the head surmounting all.

During this period they were easily provoked to bite, but never made any attempt to throw a coil round their disturbers.

From the month of April they took food freely, whenever it was offered to them, which was generally once a fortnight, although sometimes more than a month would intervene. They were fond of water which they were frequently supplied with, and had it thrown over them in the evening during the hot weather.

On the 26th May the large one killed and swallowed a partridge and soon afterwards began to cast his skin. This he did, by first rubbing his muzzle against the side of his cage until the skin became detached at the lips, and then by gliding slowly through and through

the tight drawn folds of his own body, by which means the skin was shoved farther and farther back until it was all off, or in fact until he had fairly *crept out of it!*

His colors which for some time previous had been very dim and dark, now became quite bright and clean, possessing a fine bluish or purplish bloom; and his eye which but a few minutes before, had the dull bluish hue, of a sightless orb, now shone keenly and savagely on the spectator.

Before he had cast his skin, and when he was about to swallow the partridge he had just killed,—he made several attempts to swallow it by commencing both at the tail, and at the middle of the body;—the feathers and the wings, however, offered such impediments that he was, each successive time, obliged to relinquish it, nor could he, with all his efforts, swallow it until he commenced at the head, when the wings and limbs lying in their proper direction no longer offered any resistance.

It was evident that the snake was partially blind from the scales of the old skin obstructing its sight, or it would not have attempted to swallow its prey in such an "*un-snake-like*" manner.

This snake could with ease swallow a large full grown rabbit, and therefore the partridge* was a mere trifle,—yet until he began to swallow it head foremost, it was impossible for it to pass into his throat;—from my observations, I should certainly be inclined to agree with Mr. Waterton†, when he ridicules the idea of a Rattlesnake (*crotalus horridus*) swallowing a large American squirrel tail foremost, as related by Audubon. Nevertheless, I should be sorry to say that the Rattlesnake could *not possibly* have so swallowed it, because I hold nothing to be impossible in nature, and we know that many incredible things may nevertheless be very true.

The snake may have been a very large one, and capable of swallowing a more bulky prey in which case it might be *quite possible* for him to swallow it as described by Audubon, although the instinct and habits of these reptiles and indeed common sense, would at once point out that the head is the easiest place to commence at.

In the Oriental Annual for the years, 1834 or 1835 is a story of a "Boa Constrictor," having seized upon a boatman as he lay asleep in the bottom of the boat, which was made fast to the shore of an Island in the *Sunderbunds*. The description evidently shows that the author is unacquainted with the manner in which these enormous reptiles seize on their victims. He states that the snake had coiled

* Perdix picta. † Vide London's Mag. Nat. Hist.

itself round the body of the sailor and was just in the act of crushing him, when the rest of the crew appeared and disabled the monster, which was found to be 62 feet in length.

Now the manner in which the Boa is here stated to *have coiled himself* round the body, and to be *just* in the *act* of crushing his prey is directly contrary to the habits and manners of the reptile, for instead of deliberately coiling round its prey and then crushing it, the whole is done with the speed of thought,—the eye cannot follow the rapid movement of the folds in which the victim is enveloped. Gliding gradually and as it were almost imperceptibly towards his trembling victim, until he finds himself fairly within reach,—with a sudden dash he throws himself on his prey, seizing it by the head or leg with his powerful jaws, and at the same instant rapidly winding coil on coil round the neck and body. It is in this first movement that the tremendous muscular power of his body is brought into play, and the folds which are formed at the very moment of seizure, are compressed with such desperate energy as to render the victim powerless in his grasp and the most convulsive efforts are useless, merely shaking the dreadful monster without in the least loosening his folds,—nay, on the contrary, only rendering them still tighter, until life is fairly fled. I have tried with my utmost strength to uncoil a Boa of seven feet from a partridge, but without a shadow of success, for he tightened his folds in spite of my endeavours.

Had the "Boa Constrictor" (the existence of which in India is more than doubtful!) once succeeded in coiling itself round the sailor —no earthly power could have saved his life. The crew might cut the monster to pieces but his fatal grasp would have done its deadly work, and life would have left the poor sailor, ere the folds of the Boa could have been loosed.

The velocity with which the Boa darts on his prey, not only overthrows it, but hurls his own body in advance of his head and thus formst he first coil, the rest of his length being rapidly twined at the same time.

So conscious is he of his enormous power, that if the prey be small, the scaly monster does not deign to coil himself around it. Rats, pigeons, young fowls, or any thing of that size, were seized with a sudden snatch and simply twisted under the neck of the snake; —the reptile apparently using only the weight of his body and power of his jaws to destroy life.

The usual method of feeding them, was by opening a small door of the cage and introducing a living bird or beast. On first perceiv-

ing its prey, the snake darts out his forked tongue as if licking his lips at the thoughts of the banquet, and gradually prepares himself for the deadly spring.

I introduced a full grown buck rabbit, into the den of the largest snake, which there lay coiled up in one corner.

The rabbit eyed the monster in evident uneasiness, with his ears thrown back, and nose elevated and stamping firmly with his hind feet, on the floor. The snake in the mean time was incessantly brandishing his long forked tongue, and gradually opening out the close drawn coils of his body in order to give himself room for the deadly spring.

His head then slowly and almost imperceptibly glided forward over the upper coil, towards the rabbit, which intently eyed every movement of his foe.—In an instant and with a suddenness which made me start, the snake dashed forward, but to my surprise the rabbit eluded his grasp, by springing over him.

With a loud and threatening hiss the Boa sullenly gathered himself again into his corner, where he lay still for an instant, with his head still pointing towards the rabbit.—Not liking his position, the poor buck turned to move away, and that movement decided his fate, for with the speed of lightning, both snake and rabbit rolled in a fast embrace, with a heavy crash against the side of the cage. The Boa had seized his victim by a fore leg, with one coil round the throat so closely drawn that the eyes seemed starting from their sockets; a second coil was thrown around the body, immediately below the shoulders, and another round the loins. So instantaneous was the spring, that not even one cry escaped the rabbit, and though the last convulsive motion of the hind legs, was strong enough to shake the boa, it lasted but a few minutes and all was over. For some seconds, after life had to all appearance fled, the snake still held his firm position as if to allow no chance of escape, and proceeded first to disengage his teeth from the hold he had taken and then to uncoil from the neck;—with the remaining coil he still held fast.

For some little time he continued to open and twist his jaws about most frightfully, to clear his mouth of the rabbit's fur, which done, he commenced searching for the head, and measuring the carcass all round with his nose;—during this time the tongue was ever on the move, darting and quivering about in all directions; but although constantly in contact with the animal's hair, not a vestige of saliva was left behind. There was no lubrication here.

The fore leg of the rabbit where the snake had seized him, was covered with mucus, but only there.

The monster now with a slow and frightful expanding of the jaws, took in the rabbit's nose, and then proceeded with gradually increasing distention of his mouth and the skin of the throat beneath, to suck in his prey*.

The chief difficulty seems to lie, in getting the head cleverly into the throat, which done the rest of the body soon follows, and having passed the jaws and fairly entered the gullet it may be traced quickly gliding down the lengthy brute until it arrives at the stomach.

Having thus far succeeded, the next effort is to reduce his dislocated jaws to their proper position, which is done apparently with some little trouble, by yawning and shoving them about in all possible shapes, until the end in view is accomplished. He then slowly retires to his retreat and remains quietly coiled up to digest his meals.

If the prey offered be small, I have known them not only to feed for two or three successive days, but even more than once on the same day.

On another occasion I supplied the same snake with a large "Goh†," expecting to see the monster puzzled by so ugly a customer as the lizard was reported to be; his claws were tremendous, and as his head was nearly as large as that of the snake, I expected him to show fight. He had no more chance than the poor rabbit!

The Boa lay as usual coiled up in one corner of his cage, and when I opened the door to introduce the lizard, the poor animal was so rejoiced to escape from me, that without heeding where it went, it ran and perched itself on the top of the snake.

The Boa apparently conscious of the sharpness of the "Goh's" claws, remained quite still, but evidently kept his savage eyes fixed on his intended victim.

The Goh at length left his position and retreated to the farther end of the cage, as if he had at last discovered himself to be placed in an awkward situation.

The snake widened his folds and prepared to spring, and at the same time the Goh faced him, so that I really thought a fight would

* The manner of taking in the prey, appears to me almost incapable of a true description.—The frightful distending of the jaws and throat cannot be fully conceived, by those who have not witnessed it. The snake with mouth wide open, seems to draw himself over the prey, in the same manner as a stocking slips on the leg!

† A species of monitor?

ensue;—but the sudden dash of the Boa soon settled the point, and in a second, both, as in the instance of the rabbit, lay entwined in a confused knot before me.—The snake had seized the lizard by the nose, and with such tremendous force had he thrown himself on his prey, that the head was pointed backwards towards the tail, and the neck bent double, with a tight coil round it to keep it so.—Two other coils were on the body and a last one above the whole to add weight to his enormous power.

Astonished to find the Boa close coiled round his victim a full hour after he had seized it, I took a stick to provoke him, thinking that he was not inclined to feed,—but I soon perceived the reason for his remaining thus inactive. The Goh still lived and moved its legs when touched, in spite of the suffocating pressure and weight on its body, and so tenacious of life was this reptile, that the Boa did not uncoil until $3\frac{1}{2}$ *hours* after he had seized it. Thus allowing him sufficient instinct to know when his prey is dead, which he assuredly does, the Goh must have lived in the horrid embrace of his destroyer nearly all that time.

The rabbit died in less than 10 minutes,—the Goh lived upwards of 3 hours!!

Part of the skin and several ova of the Goh were afterwards voided, but I could find no trace of its long horny claws.—The ova were covered with a strong skin, like those of a snake, and were still whole.

The grain which was in the crop of a recently fed partridge was afterwards voided whole and apparently healthy.

The long quills of a kite (*falco cheela*) were voided in a compact bundle, much better packed together than any from a *stationer's shop!*

In a work called the "Tower menagerie," is a figure of the Indian Boa, supposed to be the *Pedda Poda* of Dr. Russell, and in the short account which accompanies it, allusion is made to its lubricating its prey "with the fœtid mucus secreted in its stomach."

Reference is also made to an account "given by Mr. Broderip in the second volume of the Zoological Journal from actual observation of the specimens now in the Tower. In this account it is said that, "the serpent after slowly disengaging his folds, placed his head opposite to that of his victim, coiled himself *once more* around it to compress it into the narrowest possible compass, and then gradually propelled it into his separated jaws and dilated throat; and finally presents a disgusting picture of the snake when his meal was at an end,

with loose and apparently dislocated jaws dropping with the superfluous mucus which had been poured forth." In this account the long-cherished opinion of lubricating the prey is again set forth, and the mouth of the serpent is said to *drop* with the "*superfluous* mucus which had been *poured forth!*"

This latter expression would lead one to suppose that the mucus flowed copiously from the mouth,—which it certainly never does*.

These snakes are kept in a state of artificial warmth and in a climate far different from that of their native forests, and therefore the great flow of mucus may perhaps be induced by disease. My snakes were in their own proper climate and in perfect health and vigour, and yet they never either lubricated their prey, nor did their jaws *drop* with *any mucus at all;*—nor did they ever coil round their prey again, after having once quitted their hold. I may remark, that I have not seen Mr. BRODERIP'S account in his own words.

A large cat was once sent to me for my Boa, by some friends who maintained that the snake would not kill it, and this proved to be the case,—not from any want of power or inclination on the part of the reptile, but simply because he was not allowed to have fair play.

It is well known to naturalists that these powerful reptiles lie concealed, in expectation of some animal passing within reach of their retreat, and should an unfortunate creature stray near enough,—it is from the thicket or jungle grass that the deadly spring is made upon the unsuspecting victim. But if a Boa be surprised in open ground, instead of springing upon its disturber, it would endeavour to make its escape to the jungle, and unless closely pressed or actually assailed would make no attempt to destroy its pursuer.

I had always been in the habit of introducing the prey into the cage by a side door and from a corner of the den, the spring was made, almost before the animal introduced was aware of the danger in which it stood. Had the cat been thrust in in like manner, she would have had no time to prepare for combat ;—nothing however, would satisfy my visitors, but turning the snake out of his den into an open verandah, in which the cat was already tied by one leg.

The Boa frightened by the noise and number of people collected, endeavoured to make his escape, and for this purpose was passing on without noticing the cat, when to my surprise she seized the Boa

* If the snake had lubricated the prey, the jaws should rather have been *destitute of mucus* after swallowing it, than *dropping* with superfluous mucus!

by the thick part of the tail, with her teeth, shaking him forcibly from side to side, whilst her claws were making sad havoc on his sides.

The Boa made no attempt to bite, but as soon as the cat quitted her hold, took refuge in the cage, and coiled himself up as usual.

Victory, of course, was awarded to the cat as if there had been a fight between them. A second trial brought the same result, and I then shut the snake up, as he appeared hurt from the sharpness of the cat's teeth and claws. The cat was then introduced into the cage, and the Boa disturbed and discomfited as he was, instantly sprung at and seized her by a leg; but the cage proving too confined for so large an animal as the cat, he could not coil round her, and puss finding her legs at liberty again brought her claws to play upon the sides of her antagonist, who gave up the struggle and coiled himself again in one corner.

Not wishing to torment him longer in such a ridiculous manner, and my visitors being *fully satisfied* that a Boa had no chance with a cat,—I opened the cage door and allowed the animal to escape, which she lost no time in doing, for notwithstanding her victory, she evidently felt ill at ease in the snake's presence.

Had the cage been large enough to have allowed the Boa to throw his coils round the cat when he seized her, the legs of poor puss would have been firmly bound to her sides, and all power of biting or scratching very speedily put an end to.

One interesting circumstance was however, produced by this failure of the Boa, which was the instinct shown by the cat in her mode of attacking the snake. Had she seized him by the head or throat, the tail would instantly have been coiled round her with such force as not only would have obliged her to quit her hold, but would, in a very short time, have killed her. By seizing on the tail, she showed that nature had implanted in her a knowledge of her enemy's mode of attack, and she at once put it out of his power to bring his enormous muscular strength into play.

The mongoose (*Mangusta grisea*) a decided enemy and destroyer of the deadly Cobra di capello (*Naia vulgaris*) would be easily crushed by a Boa because it generally seizes by the throat; (I say generally, because it sometimes fails, but in this case it shakes the snake so violently as to prevent its biting;—or it may chance that the snake kills it.) Instinct teaches this little animal to avoid the poisoned fangs of the Cobra, by seizing on the throat, and putting it out of the snake's power to bite; and the cat in like manner seizes

on the tail of the Boa to prevent the death-knot being thrown around its body. Were these animals to reverse their mode of attack, both would infallibly be destroyed; for were the Mongoose to seize a Cobra by the tail, the reptile would turn and bite,—were the cat to seize the Boa by the throat the tail would twine round and suffocate her.

Thus, throughout nature, has the all-wise and merciful creator bestowed on his most inoffensive creatures, the knowledge necessary to preserve them from their deadliest enemies.

NOTE. When I first procured these snakes they appeared to be half stupified, and the Jugglers from whom I purchased them, threw the largest one, (8½ feet) round my neck. For a fortnight or three weeks after this I continued to handle them with impunity; but one morning while in the act of stooping with a pan of water in my hand, the large snake sprung at me, striking the pan with such force as to dash it out of my hand. By striking his nose against the pan, it turned his head away from me and he darted past;—had he missed the pan, he would have seized me by the arm and thrown himself round my neck.—A friend who was with me, thinking that the snake had seized me, ran into the house for a knife to cut the muscles of the back—but fortunately this was unnecessary or I fear I should have been strangled before the folds could have been loosed.

I found afterwards that they had been drugged with opium in their water, in order to render them quiet and harmless, but as I did not pursue this system, the effect wore off, and I was obliged to be cautious in approaching them afterwards, as they frequently sprung against the bars of their cage at any person passing them.

Simla, 4th April, 1837.

III.—*Notice of a skull (fragment) of a gigantic fossil Batrachian.* By *Dr.* T. CANTOR.

[From the Asiatic Researches, Vol. XIX.*]

This interesting fossil remain was discovered by Col. COLVIN in the *Nahun* field from whence the chief part of the *Dádúpur* fossils were extracted. Through the care of Mr. J. PRINSEP, with whom it was deposited, the sandstone in which it was imbedded, has been removed as much as possible, and the fragment appears now in the state in which it is represented in the accompanying sketches. It is to be regretted that a transversal fracture, pointing to a remote period, has left the fragment offering very few data for conclusions; to which may be added the altered position of several parts, evidences of the

* [This is so very extraordinary a fossil that we make no apology for outstepping strict rules (as we did in the case of the Sivatherium), and publishing it from the text of the quarto Researches, before the latter have appeared.—ED.]

bones having undergone a severe compression, most probably at the moment the animal perished.

The general appearance indicates beyond doubt the animal having belonged to the third great class of vertebrata, the reptiles: the difference however in the formation of the skulls of the Chelonians and Saurians renders these two orders quite out of question. The formation and structure of the teeth, the separation of the lower jaw in the middle afford certainly characteristics of the Ophidians; Mr. PRINSEP indeed was led by these very circumstances when he examined the fossil in its original state, with only the anterior part of the jaws exposed, to suppose them belonging to a serpent*. The clearing of the matrix however soon shewed the total difference from several skulls of serpents, as represented in the *Règne animal*, which animals however have the two above mentioned characteristics in common with the Batrachians.

With those skulls of recent Batrachians, which I have been able to consult, (represented in CUVIER's Ossemens fossiles, tome V. 2e. partie, Plate XXIV.) the present one disagrees particularly in the formation of the intermaxillary bone situated rather over, than between the maxillary, the branches of which are immediately united in the middle, covered by the arches, extending to both sides, assisted by two slender apophyses, which are fixed to the skull between the parietal and the anterior frontal bones.

The rounded profile of the upper and lower jaw afford in their general appearance a characteristic of the Batrachians, in some of which—the frogs, the jaw, generally speaking the upper, is provided with minute teeth, corresponding in form and distribution with those of the fossil.

The separation at the symphysis, the wide arch of the lower jaw, the excavation of the inner surface, in short the development of this bone, serving for insertion of the tongue and muscles, which solely perform the function of inspiration, exhibit phenomena exclusively repeated in the recent Batrachians, to which order I am thus induced to look upon the extinct owner of the present skull as closely allied.

CUVIER characterises the frogs (*Rana*, Laurenti) by their being furnished by a row of small teeth in the upper jaw, and an interrupted

* It was the supposition of its being a serpent's head that led to my placing the fossil in the hands of Dr. CANTOR, whom I knew to have paid particular attention to this department of natural history. Colonel COLVIN, when it was still half hidden by matrix imagined it to belong to the *Lacertæ*. It was at his suggestion that I attempted to clear it and examine its peculiarities, which he anticipated would be found of high interest.—ED.

transverse range of palatial teeth, while the toads (*Bufo*, Laur.) have no teeth whatever (Règne animal: Batrachians). Mr. BLAINVILLE in his masterly 'Analyse d'un systeme général d'erpetologie and d'amphibiologie (Nouv. Annales du mus. d'hist. nat. t. IVe. p. 279) offers as a diagnostic of his second genus 'Rainette,' *Hyla.* the tree-frog, its having palatial and maxillar teeth: in his third genus, 'Grenouille,' *Rana*, some species partake in this formation, while others are void of teeth in the lower jaw.

Notwithstanding the very minute inquiry instituted by Mr. PRINSEP, no teeth are found immediately situated in the lower jaw and it is impossible to decide, whether the teeth imbedded in the matrix along the inner margin of the left lower jaw are palatial or belonging to either of the two jaws. This however is of less consequence, for if it be at all allowed to use the teeth as guides, the fossil representative can but be approximated to either the *Hylæ* or *Ranæ*. A comparison in the mode of life of either might perhaps carry a step farther: the recent tree frogs, confined to trees, feed exclusively upon insects, while the frogs properly so called, in their mixed aquatic and terrestrial hunts, prey not only upon insects, but also upon other animal matters. Considering the fossil teeth, it appears as nature intended these sharp hooks to fix objects different from the slender bodies of insects.

By comparing the fossil the length of which is $7\frac{1}{2}$ inches, to a skull of the common green frog, (*Rana esculenta*, LINN.) it appears, that at least one fourth is missing or, that the original length of the skull must have been about 10 inches. Following up this comparison, we find the skull of the common frog is to the total length of the body as one to four, which proportion, applied to the fossil representative, gives this, from the muzzle to the extremity of the body, the gigantic length of forty inches, a proportion between fossil and recent species, which however is met with in the neighbouring family, the salamanders, of which the recent members are of small size compared to the skeletons, one of which, (the renowned 'Homo diluvii testis' of SCHEUCHZER,) discovered in the schist of Oeningen, measured three feet in length.

Explanation of the sketches, Pl. XXXI. (about $\frac{2}{3}$th linear dimensions.)

A. The upper surface.

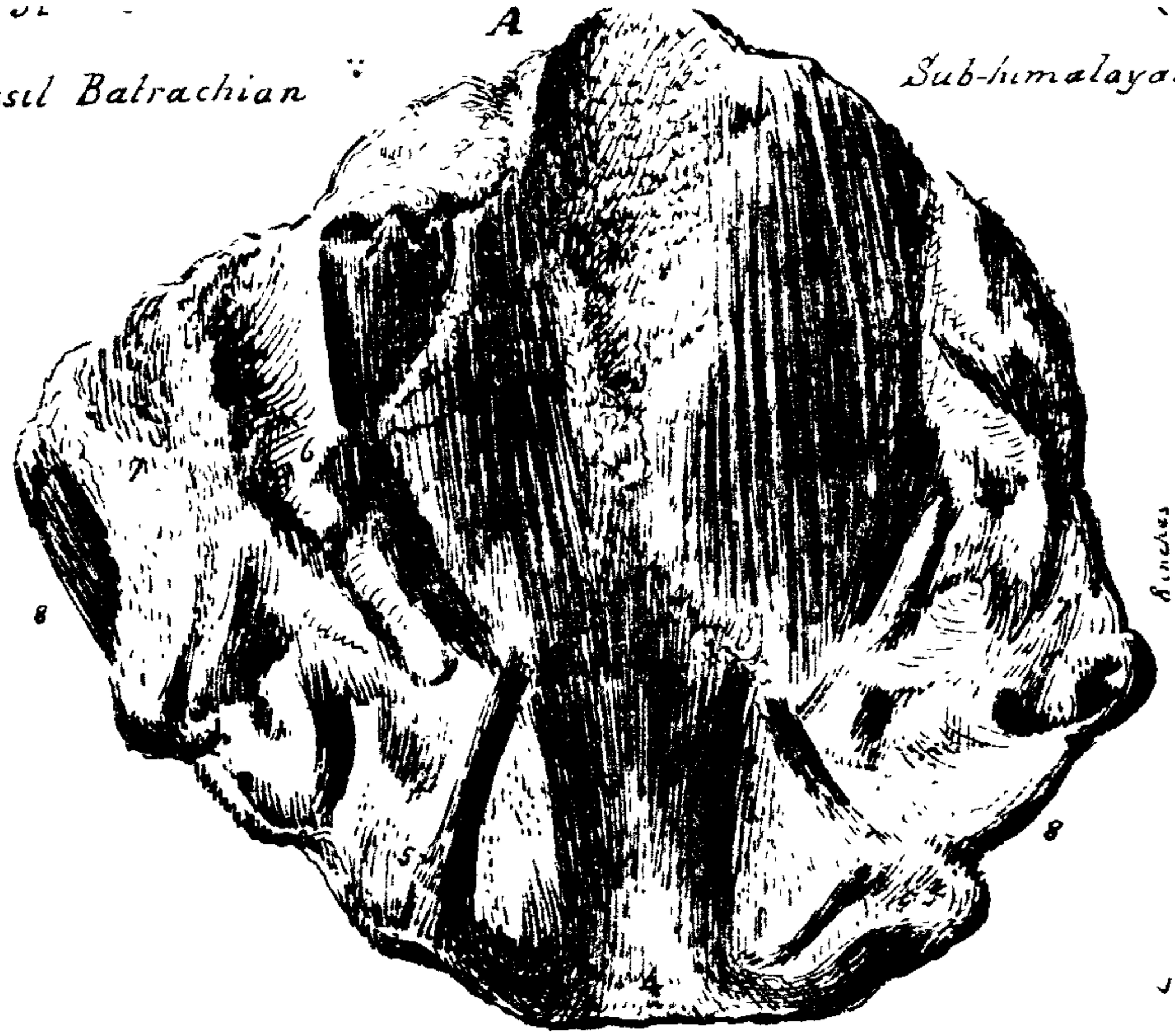
1. The parietal bones, about $\frac{1}{8}$ of an inch in diameter, strongly marked with the rays of ossification, united by a very fine suture to

2. The frontal, formed somewhat similarly to the same of *Rana boans*, L. (Cuv. Ossem. foss. loc. cit.)

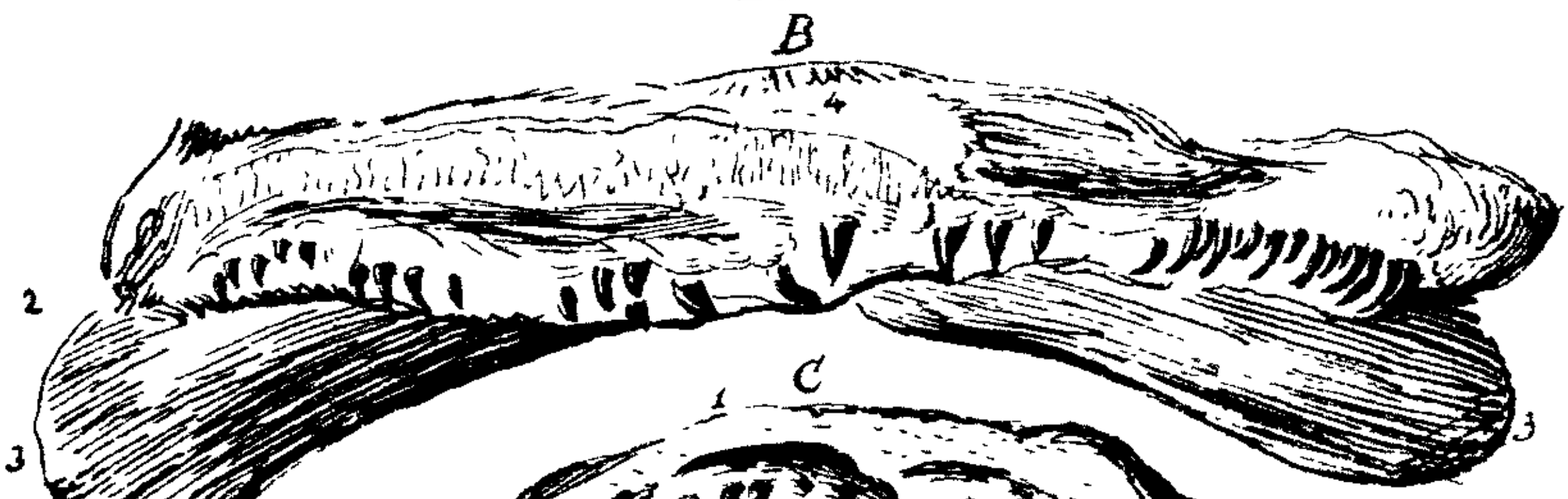
Fossil Batrachian

Sub-himalayas

A



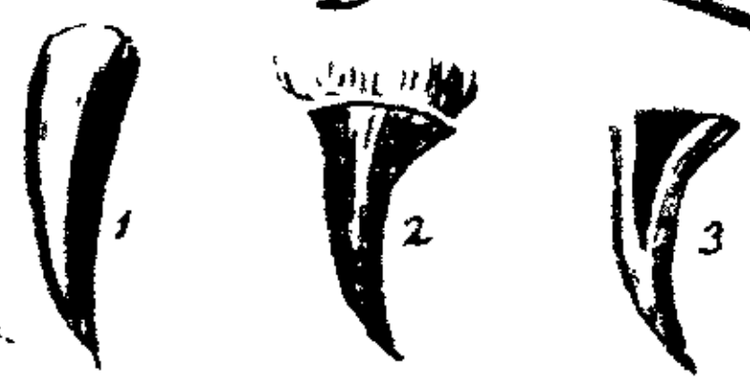
B



C



D



D

Printed Lith from D Cantor's drawing and from the fossil.

3. The anterior frontals; their suture is entirely effaced, a case not uncommon in aged specimens of recent reptiles.

4. The intermaxillary bone; the muzzle having suffered a great deal, it is impossible to discover the junction between this and the anterior frontals.—Between the arch and the corresponding part of the maxillary there is a longitudinal space, filled with matrix, so that the intermaxillary appears superincumbent over the upper jaw, while it, in the recent frogs, forms the anterior part of the jaw, and is as well as the latter furnished with teeth.

5. The apophyses of the intermaxillary, proportionally long and slender, support the arches, a distribution observed in the axolote as represented by CUVIER, (loc. cit. pl. XXVII. figs. 24 and 25.)

6. The apophysis which terminated the anterior part of the cavity of the eye, analogous to the apophysis, which in recent frogs proceeds from the side of the anterior frontals.—In front of this and nearer towards the muzzle we are to search for the situation of the nostrils.

7. Matrix with projecting indistinct fragmina of bones.

8. Part of the lower jaw.

B. A front view

of the fossil shewing the compression, the position of the teeth, and the angle of the lower jaws, pressed up into the cavity of the palate: the references as in fig. A.

C. The lower surface.

1. The intermaxillary bone.

2. The upper jaw: in this and the surrounding matrix a number of teeth, the largest of which in the middle toward the symphisis.

3. The lower jaw formed by two wide arches separated at the symphisis, the external surface convex, the internal excavated.

4. Fragments probably of the pterygoid bone. (Vide CUVIER, loc. cit. p. 389.)

D. Teeth, (nat. size.)

The teeth are comparatively small, conic and recurved, of the same formation as those of the serpents, (shews a lateral section of a tooth.)

The larger are fixed close to each other and in a single row, while two or three rows of small teeth appear in the left lateral branch of the upper jaw. The matrix covering the left side of the palate contains several fragmina, the original situation of which, whether in the palate or in either of the jaws, it would be, as before said, difficult to determine.

IV.—*Some account of the Wars between Burmah and China, together with the journals and routes of three different Embassies sent to Pekin by the King of Ava: taken from Burmese documents. By Lieutenant-Colonel* H. BURNEY, *Resident in Ava.*

[Concluded from p. 451.]

The last embassy sent by the king of *Ava* to *Pekin* accompanied a Chinese embassy, which arrived at *Ava* in the month of April, 1833. The principal envoy from *China* was distinguished by a great attachment to strong liquors, with which the Burmese Government liberally supplied him, and he was often publicly seen in a state of intoxication. The principal envoy of the Burmese deputation was a *Tsaredo-gyih* whose family name is MAUNG WENG, and with whom I was well acquainted. But on his return from *China* he caught a jungle fever which brought on mental derangement, from the effects of which the poor man is not recovered at this date, 1836. The fever was caught after the envoy had entered his own country again, for a large tract of territory above *Ava* is considered by the Burmese as particularly unhealthy.

The following is a translation of such portions of the proceedings of this last embassy as I have yet been able to procure.

Letter from the Emperor of China to the King of Ava in 1833.

Elder brother TAUK-KUON, king of *U'dî*, who, assisted by the *Thagyá Nat*, governs the great kingdoms and countries to the eastward, affectionately addresses younger brother, the sun-descended king, lord of the golden palace, and owner of mines of gold, silver, rubies, amber and noble serpentine, who governs the great kingdoms and countries and a multitude of umbrella-wearing chiefs to the westward. Elder brother, who obtained possession of the throne through the glory of his ancestors, is in amicable relations with various kingdoms and countries. In elder brother's empire also, elder brother himself, his queen, sons, daughters, nobles and officers, together with the inhabitants of the country, are in good health; and he desires to hear and know, that in younger brother's empire also, the sun-descended king, his queen, sons, daughters, nobles, officers, the poor people and royal slaves, are all well and happy. In pursuance of the custom which has existed since the year 1149, (A. D. 1787,) in the reign of (his) grand-father KHYENG-LOUN, king of *U'dî*, for a royal letter with presents to pass once in ten years, the ten years having expired, a royal letter with gifts, four good horses, and various cloths, such as are always presented, are now sent with TSHEIN-TA'-LO'-YE', and YENG-TSHENG-YE'. On their arrival, let younger brother, the sun-descended king, agreeably to the friendship and love subsisting between the two countries as if they were one, and according to existing custom, prepare a royal letter and envoys in return and forward them. When the men deputed by the sun-descended king and the royal letter and gifts arrive at the city of *Maing:tshî* (*Yunan*), the *Tsoún-tú* of *Maing :tshi*, (governor general of *Yunan*,) will appoint officers to convey them safely on the road as far as the great city (*Pekin*), and the envoys deputed by the sun-descended king with the royal letter and presents shall be suitably taken care of and entertained. Let the men, TSHEIN-TA'-LO'-YE', and YENG-TSHENG-YE', whom elder brother deputes, return soon; and when the envoys come back, it will be like having seen the countenance of younger brother, the lord of the golden palace.

Answer from the King of Ava to the letter from the Emperor of China, received at Ava in the month of April, 1833.

The lord of the *Tshaddan* elephant, the master of many white elephants, the owner of mines of gold, silver, rubies, amber and noble serpentine, who bears the

title and designation of *Thiri tari bawaná ditiyá dipadi pawara pandita mahá dhamma-rája* dirájá*, the royal supporter of religion, the sun-descended king, lord of life and great king of righteousness, who governs the great kingdoms and countries and a multitude of umbrella-wearing chiefs to the westward, affectionately addresses (his) royal friend TAUK-KUON, king of *U'dì*, who governs the great kingdoms and countries and a multitude of umbrella-wearing chiefs to the eastward. In accordance with the friendship which (his) royal grand-father MEN:DARA'-GYI'H, (great king of righteousness,) who founded the golden city of *Amarapúra*, and king of *U'dì's* royal grand-father, KHYENG-LOUN, affectionately cultivated for a long period of years, royal letters with presents were reciprocally sent once in ten years without interruption. On the 8th day of the waning moon of *Tayu* in the Burmese year 1194, (April 12th, 1833,) when royal friend (king of *Ava*) had been in possession of the throne for fourteen years, and TAUK-KUON king of *U'dì* for 12 years, TSHEIN-TA'-LO'-YE', YENG-TSHENG-YE', TSO'-LO'-TSOUN, TSA'N-LO'-TSO'UN, LA'-TSHENG-YE' and YAN-LA-TSHENG-YE', having arrived with a royal letter and various presents, consisting of three cups of the noble serpentine; two cups of the same, carved with flowers; one goglet of the same; two jackets of fur lined with yellow silk, four jackets of the same fur lined with plum-colored silk; eight rolls of gold cloth or brocade; six rolls of various kinds of velvet; six large rolls of satin, and four horses: they were received and brought (to *Ava*) in a suitable manner. On the day on which the New year's *Kado* (beg-pardon audience) was held, the royal letter and presents being arranged in the palace in front of the throne, his majesty came out and took his seat attended by the royal son, younger brothers, kinsmen, and all the nobles and officers, and had the royal letter submitted and read out. His majesty was pleased to hear, that the king of *U'dì* himself, his queen, sons, daughters and kinsmen are well and happy. Royal friend himself also, his queen, son, daughters and kinsmen are well and happy. Agreeably to the friendship subsisting between the two great countries, his Majesty has appointed as his envoys in return MEN:-THA'-YA'ZA'-GYÓ, of the royal household, NE'-MYO'-YA'ZA', NE-MYO'-YE'-GAUNG NORATHA' and NE'-MYO'-BULA-THU', and sends them with the following presents: two ruby rings for royal friend's own wearing; two sapphire rings; two blocks of noble serpentine weighing forty-eight viss and forty ticals; four elephants' teeth weighing forty-four viss and sixty ticals; three whole pieces of scarlet broad cloth, three of green and two of yellow; ten pieces of fine muslin; ten pieces of long cloth, ten pieces of Europe chintz, ten pieces of Europe handkerchiefs; ten foreign carpets; one hundred books of gold leaf, one hundred of silver leaf; three viss of white sandal-wood, three viss of red, three viss of bastard sandal-wood; ten bottles of otto of roses; ten bottles of rose water; two lacquered ware boxes with high conical covers, gilded and inlaid with pieces of looking glass; two of the same with flowers engraved on the lacquered work and gilded; two of the same engraved according to the *Yuon* pattern, two of the same with high stands and engraved in the same manner, four round lacquered boxes, each capable of containing half a basket and engraved according to the *Yuon* pattern, 50 small round boxes of a quarter of a basket measure each; fifteen peacock's tails, with four male elephants and one female.

Let these envoys return soon, and when they come back, it will be like having met and seen royal friend, king of *U'dì*.

Copy of the instructions given by the Ministers of Ava to the Ambassadors appointed to proceed to China from Ava.

MEN.THA'-YA ZA'-GYÓ, NE'-MYÓ-YA'ZA', NE'-MYÓ-YE'-GAUNG NORATHA' and NE'-MYÓ-BULA-THU', who have been appointed by his majesty ambassadors to proceed to *China*, having received charge of the royal letter and presents, and having been furnished with boats and crews complete, namely, the governor of *Ba-mó's* gilded paddle boat with a brass *pya-that* for the king's letter, a *phaung* or accommodation boat with a double roof for the royal presents, a war boat for MEN:THA'-YA'ZA'-GYO', a *phaung* with a plain roof for the other ambassadors, and another *phaung* with a roof partly plain and partly double for the Chinese envoys: they will depart from *Ava* on a propitious day. They must travel the proper stages in the following order. In front of all, the boat with the king's letter, then that with the royal

* This is a title conferred upon himself by the king of *Ava* since the date of the war with the British Government, and the meaning of the *Pali* words is thus translated by the Burmese: "The Illustrious Lord of Life, who exercises boundless dominion and possesses supreme wisdom, the exalted king of righteousness and king of kings."—It is, I believe, the *third* title which he has given himself since his accession to the throne in 1819.

presents, then MEN:THA'-YA'ZA'-GYÓ's boat, then the boat of the other ambassadors, then the boat of the Chinese envoys, and last the governor of *Ba-mó's phaung* with the war and other paddle and row boats.

At each halting-place the sheds and provisions which have been built and collected, are to be allotted and distributed by the head men of the place, who will, agreeably to the orders issued by the ministers, calculate the number of men, and deliver provisions sufficient for each man from one halting-place to another.

On arriving at *Ba-mó*, the 215 boatmen with the *phaungs* and other boats must be sent back to *Ava*, the governor and officers of *Ba-mo* supplying the men with provisions sufficient for their journey back. Letters reporting the day of arrival there and every other particular, must also be sent down by these men for the information of the king and ministers.

MEN.THA'-YA'ZA'-GYÓ, and some of the officers with him, will have a shed with a square roof built at *Ba-mó*, and lodge the royal letter and presents in the same. For the more easy conveyance of the royal letter the governor of that place will construct a plank *Tu-zaung* (a portable pyramidical structure) having three roofs, and an umbrella and other ornaments, with a door on one side with a lock and key, and varnish and gild the whole. In this the royal letter must be placed, the lock fastened and care taken that no rain is admitted and it must be carried carefully by men whom the town of *Ba-mó* will furnish.

The four male elephants and one female, intended as presents for the emperor of *China*, will proceed by land to *Ba-má*, so that they may travel with ease and be fully supplied with grass.

Two hundred men being expeditiously supplied to proceed from *Ba-mô*, to the Chinese boundary, the ambassadors will travel by the usual stages, and having in front two men with rods.

On your arrival at *Maing-tshi* viâ *Mo:myin*, you will represent that you are to promote the advantage of both sovereigns; that friendship has existed between the countries of the two kings (here some of the long titles of the two kings are given), from the time of their ancestors; and that you have been deputed and are come as ambassadors with a royal letter and presents. That in the eastern empire YUEN-TA'-YAIN the *Tsoún-tú* of *Maing:tshi*, and in the western MENTH'A-YA'ZA' the governor of *Ba-mó* are placed like boundary flags and out-posts, and are required to promote the advantage of both countries, conformably to the qualifications essential to governors and generals*.

Do not remain long at *Maing:tshi*: request that the royal letter and presents and the elephants may be conveyed, so as to reach *Pekin* properly; speak boldly, and as persons who are well acquainted with what is due to kings, to religion and to this world, and then proceed.

Speak also on the subject of *Ma-ha-weng*, and *Maha-nué* of *Kyain-youn-gyín*, in the manner you have been instructed, following the memorandum given you on this point, and taking care that much discussion may not arise, and that you may persuade and overcome.

Prepare and transmit a report to *Ava* of all that may be proper to be submitted without any omissions, once from *Mo:myín*, and once from *Maing:tshi*.

After leaving *Maing:tshi*, and when you reach *Pekin*, observe and record every thing carefully and unreservedly, so as to justify the confidence and favor of his majesty, who has selected you, and speak daily with firmness.

You must note and bring back with you, after making inquiries secretly and ascertaining, what the emperor of *China* worships in order to obtain *Neibban*; what he practises and worships in order to obtain advantages in this world; as well as an account of his queens, concubines, kinsmen, children, nobles and officers, and of

* The Burmese have lists of the qualifications required from, or characteristics of every public officer and condition of life. Those appertaining to a general are nine-namely: 1st. Skill in overcoming the enemy. 2nd. Knowledge of good ground or post in which to defeat an enemy. 3rd. Not deserting his army in adversity, or when defeated. 4th. Sharing good or evil with his army. 5th. Possessing great physical powers. 6th. Possessing purity of mind. 7th. Well versed in the *The-nen-ga-byuhakyan* (a work on tactics). 8th. Ability to direct an army without fatiguing or distressing it. 9th. Full of activity and courage.

The qualifications of an ambassador are these eight. 1st. Expert in hearing intelligence. 2nd. Expert in conveying intelligence. 3rd. Clever in learning and observing every thing. 4th. Clever in repeating the whole of a communication. 5th. Ready in comprehending the object and meaning of a communication. 6th. Clever in making a communication fully understood. 7th. Clever in comprehending the advantage or disadvantage of any communication. 8th. Keeping a guard over his mind, words and acts, so as to prevent disputes and misunderstandings.

their equipage, dress and ceremonies, with a map and description of *China* and *Tartary*. You must express a desire to go and worship the genuine teeth of GOUDAMA, and in order that you may obtain positive information, you must go yourself and see and take an account of every thing curious or worthy to be seen and known.

You must also apply for permission to go and see and take, an account of caves, pagodas, and *zayats* in every quarter.

You must always keep in mind the interest of his majesty, and execute his service boldly and truly, in fulfilment of his majesty's belief when he appointed you, that you would accomplish every point in which the two countries are concerned, and in accordance with the favor which you have received from, and the obligation which you owe to his majesty.

The royal Woondauk MAHA'-MEN-GYA'-YA'ZA' submitted and read the above on the 28th June 1833 to the prince of *Tsalen*, and to the *Wún-gyýhs*, KYI'-WUN *Men:gyih*, MYA'WADI' *Men:gyih*, PADAIN *Men:gyih*, NGARANE *Men:gyih*, *and* KYOUK-TSHAUNG *Men:gyih*.

Route of a Journey from the City of Ava to the City of Pekin, travelled by a Mission deputed by the King of Ava to the Emperor of China in the year 1833.

Date.	Names of places.	Things.	Remarks.
27th June, .. 1833.	Left the city of *Ava* by water, and stopped at the temporary buildings occupied by the Chinese Ambassadors at the pagoda of *Shue-gyet*, ..	..	
28th.	Proceeded to *Amarapúra* at which the Chinese envoys desired to stop a day with some of their relatives and friends residing in that city...	3	The boats of the Chinese envoys were made to follow those of the Burmese envoys.
30th.	Stopped at *Shyáh-yaung* village under *Tságain*,.....	3	
1st July, ..	Village of *Shein-ma-gá*,.....	7	
2nd.	City of *Kyauk-myaung*,.....	11	
3rd.	Jungle village of *Thein-kha*,.....	7	
4th.	City of *Tsam-bay-nagó*,..... .	6	
5th.	City of *Henga-mó*, ...	9	
6th.	City of *Ta-gaung*,.....	6	
7th.	City of *Khyun-daung*,.....	4	
8th.	Village of *Thi-gyain* under the city of *Mya-daung*, ...	4	
9th.	Village of *Thá-gaya* under ditto, ...	5	
10th.	Village of *Nyaung-khye-dauk* under city of *Ka-thá*,.....	5	
11th.	City of *Ka-thá* where the fleet stopped a day, as the boats of the Chinese envoys had not come up, and the stream was very violent,	4	
13th.	Village of *Let-pún-zín* (line of silk-cotton trees) under city of *Yen:gé* or *Yeng-khyé*, ...	3	
14th.	Village of *Tshi-byú-goún* under city of *Shúe-gú*, ...	5	
15th.	City of *Shúe-gú*, ...	5	
16th.	Village of *Tsín-khan* under city of *Kaung-toun*,.....	5	
17th.	Village of *Len-ban:gya* under city of *Ba-mó*, ...	5	
18th.	City of *Ba-mó*,.....	3	The Chinese envoys, TSHEIN-TA'-LÔ-YE', and YENG-TSHENG-YE', had 34 followers, the 4 Burmese envoys had 46, and the crews of the boats amounted to 218 men. All these men were supplied with provisions by the chiefs of the different towns and villages on our route from *Ava* to *Ba-mó*, and the current being very strong between the village of *Thi-gyain* and *Ba-mó*, the fleet was assisted by additional paddle boats and men sent by the chiefs of the different places lying in that portion of our journey. On the 26th June,

the officer in charge of the elephants intended as presents for the emperor of *China* arrived at *Ba-mó*, with four of these animals only, and reported, that on the journey from *Ava*, they had all got loose at the village of *Mo-wún*, under *Kaung-toún*, and that on pursuing and overtaking them on the *Nga-zín Ka-khyen* hill, in the territory of *Mo-meit*, he found one dead. The mission stopped 23 days, at *Ba-mó*, preparing for their land journey and collecting horses and porters. The governor made a small pyramidal box with a lock and key and gilded it all over, for holding the King of *Ava's* letter. On the 11th August, 1833, the embassy left *Ba-mó* in the following order: first, 2 men holding gilded rods; then the box containing the royal letter; then the boxes containing the royal presents; then the baggage of the ambassadors; then a couple of jingals; then 100 musqueteers; and then the Burmese ambassadors dressed in full uniform and mounted on elephants. On both sides of the streets, the women poured* out pots of water, and the officers of the city escorted the embassy outside, with music and dancing. Sacrifices were also made, by order of the Governor, to the guardian *Nats* of the place. There were 200 porters, and 50 bullocks for conveying the baggage, and a guard of 100 musqueteers and 100 lancers with 2 jingals, besides 15 men sent by the governor of *Ba-mó* to return from *Yu-nan*, with letters from the ambassadors, reporting progress. Outside of the city the principal Burmese ambassador entered a covered sedan chair, and the rest of the Burmese and the Chinese envoys mounted horses.

Date.	Names of places.	Taings.	Remarks.
11th Aug.	Left *Ba-mó* and slept at the village of *Mó:mauk*, ...	6	
12th.	Slept at the *Ta-dá-gyi*(great bridge),	4	
13th.	Slept at the village of the *Ka-khyen* chief of Tein mountain,.....	6	
14th.	Slept at the village of the *Ka-khyen* chief *Ma-theng*, ...	6	Here the mission stopped a day in consequence of the porters not having come up with the baggage.
16th.	Slept at the foot of the *Main-khah* mountain,.....	6	As far as this place provisions were brought for us all from *Ba-mó*.
17th.	Slept at the *Luay-laing-ken* or chokey (Shan *Lóai-leng*, red hill or mountain), ...	7	Here the mission was met by a party of Chinese, under *Tsoun-ló-tsóun*, which had been sent by the governor of *Mó:myín* (*Theng-ye*) and to which we transferred the charge of the royal letter and presents and all our baggage. The Burmese porters and guard who came with us from *Ba-mó*, were paid what was right and proper and sent back to that city on the 18th.
18th.	Left the frontier chokey and reached the city of *Mó:wún* (Chinese *Long-tchuen-fú*) (Shan *Mung-wan*),	8	This is one of the 8 Shan cities. The mission considering that it was the rainy season when the streams are full, and difficult to cross, stopped at this city 3 days, for the purpose of recruiting the royal elephants properly.
22nd.	Left *Mó:wún*, and slept at the *Kendat* or fortified chokey on the top of the *Shyá-mue-loke* mountain,.. ..		Here the mission found TA-LÔ-YE, the *Nan-ten* officer, having authority over 1,000 men, and TSOUN-YÍN having authority over 500 men, who were sent by the governor of *Mó:myín* to meet the mission, and who, after communicating with the envoys, returned to *Mó:myín*.
23rd.	Slept at the village of *Man-toun*,....	8	
24th.	Slept at the village of *Nan-teng*,.... (Shan *Múng-tí* and *Burmese Maindi*.)	7	Here the mission stopped a day to refresh the elephants.
26th.	Reached the city of *Mó:myín*, (Chinese *Theng-yi-chows*, Shan *Múng-myen*,)	10	The governor of *Mó:myín*

* Libations to GAUDAMA here made with prayers and wishes for the success of the mission and the glory of their sovereign.

came out in state with troops half a *taing* in advance of the city to meet the Burmese envoys, whom he conveyed into the town in sedan chairs, and entertained with a play. The walls of *Mó:myín* are of brick, 1,050 cubits square and 10 cubits high, with one gateway on each side. There is a governor and the military officer. The former has charge of the revenue and judicial affairs and the latter commands the military. There are 3,000 soldiers and only 10 guns and mortars. The governor's house is at the north-west angle of the town, and to the westward there are two granaries capable of holding about 2,000 baskets of paddy each. The envoys reported their arrival at *Mó:myin* to the King of *Ava*. On the 4th September, the governor of *Mó.myín* dispatched the Burmese Interpreter, THIRI-GYÔ-DEN, with the Chinese Interpreter NGA-SHUE-THA, under charge of HA-TSOUN-YÉN, KYÍ-PU-TA-YÍN and YAN-LÔ-TSOU'N, to proceed to *Pekin* in advance of the mission. The envoys and the royal letter and presents were then put in charge of the officer TSU-TA'-LÔ-YE', who wore a blue button and commanded 1,000 men, the interpreter MAIN-THA, who was a Shan, and a Chinese interpreter NGA-PA-NOUK, and 5 other men who wore a white button. The mission stopped nine days at *Mó.myín*.

Date.	Names of places.	Taings.	Remarks.
7th Sept. ..	Left the city of *Mó-myín*, and slept at the village of *Kán-lun-tshan*, ..	8	
8th.	Stopped at the village of *Pá-weng*, after crossing an iron bridge 7 cubits broad and 70 long, over the *Shue-lí* river, ...	8	
9th.	Stopped at the village of *Phú-pyauk*, after crossing the Salueen river in a boat, ...	7	
10th.	Slept at the city of *Wun-tsheng* Chinese *yong-tchang-fú* and Burmese *Wun-zen*.....	6	The governor and military commander came out in state and met the mission a *Taing* in advance of this city where we stopped a day. The walls of this city are 1750 cubits square and 6 cubits high. There are 2 arched gateways on each face, and there is a military officer as well as a governor here.
12th. Sept...	Slept at the village of *Kuonbô*,.....	4	
13th.	Stopped at the village of *Shyá-muhô*, after crossing an iron bridge 105 cubits long and seven broad, over the *Mé-khaung* river, ...	8	
14th.	Slept at *Youn-pyen-hien*, ...	9	
15th.	Slept at the village of *Khuon-leng-phú*, ...	9	
16th.	Five *taings* beyond *Khuon-leng-phú* (we) crossed an iron bridge seventy cubits long and seven broad, over a river which separates from the *Hó-kyán* and falls into the *Mé-khaung* and stopped at the village of *Yun-pyin-hien*, ...	..	
17th.	Crossed, in the village of *Yan-pyin-hien*, an iron bridge 56 cubits long and 7 broad over the *Hókyán* river, which flows from the *Tálí* lake, and stopped at the village of *Hô-kyánpo*	6	
18th.	Slept at the city of *Tsauk-chow* subject to the jurisdiction of the city of *Táli*, ...	9	There is no wall round this town, but there is an arched gate-way with a double roof.
19th.	Slept at the village of *Khoún-haik*,..	8	
20th.	Slept at the village of *Yit-nán-yí*, ..	9	
21st.	Slept at the village of *Phú-poún*,....	6	
22nd.	Slept at the village of *Shyá-khyauk*,	8	
23rd.	Passed the city of *Kyen-nán-chow*, ..	3	The walls of this town are five cubits high, 700 cubits long from east to west, and upwards of 560 cubits from north to south, with a gateway on each face. There is a governor and a commander of cavalry here.

Date.	Names of places.	Taings.	Remarks.
23rd.	Slept at the village of *Li-hó*, ...	3	
24th.	Slept at the city of *Tshú-shyoún (Tchou-hivng* or *Tchou-yung.)*	6	The walls of this town are about 5 or 6 cubits high, 2,100 cubits long from east to west, and 2,800 cubits from north to south. There are 2 gates in the eastern and western faces, and one only at each of the other two faces. A governor, a military officer, a Shyeng-gueng and three other officers have charge of the town.
25th.	Slept at the city of *Kueng-toún-hien*,	7	
26th.	Slept at the village of *Shyé-tshe*, ..	6	
27th.	Slept at the city of *Lú-thoún-hien*, ..	8	The walls of this town are upwards of 2,100 cubits square and 4 or 5 cubits high, with a gateway on each of the 4 sides. A governor has charge of the town.
28th.	Slept at the village of *Ló-ya-kuon*, ..	6	
29th.	Slept at the city of *An-léng-chow*, ..	8	The walls of this town are upwards of 4,900 cubits square and 5 or 6 high, with 1 gateway on each face. There is a governor here also. Seeing but few houses within and without the city, we asked the inhabitants the cause, and they told us that the town had been ruined by an excessive salt tax.
30th.	Reached the city of *Maing-tshi, (Yu-nan,)* the residence of the *Tsoún-tú*, ...	6	The walls of this town are upwards of 6,300 cubits square and 6 cubits high, with battlements complete. On each, the eastern and western faces, there are two gateways, and on the southern and northern only one. At each gateway there are 6 pieces of cannon capable of carrying shot weighing a *viss* or half a *viss*. The gateways are arched and have double roofs over them. There is a large lake which extends from the south to the west of the town, in which there is a great deal of cultivation. Two or three severe shocks of earthquake had been daily felt in this town between the 6th and 28th September, 1833, and upwards of 600 brick houses had been thrown down, and upwards of 90 men killed. We saw portions of the walls of the town and a great many houses in ruins, and found the inhabitants of the country much alarmed.

On inquiry we learnt, that at *Yu-nan*, there is a Tsoún-tú named YUENG-TA-YENG, and a *Títú* named LO'-TA'-YENG and there are 8 officers under them Lí-tá-yeng, Phan-tá-yeng, Khô-tá-yeng, Nyo-tá-yeng, Tshein-tá-lô-yê, Tshan-tá-lô-yê, Lô-tá-lô-yê, and a royal teacher named LI'-TAN. The Tsoûn-tú superintends the revenue and civil affairs; Títú governs the military. The Lí-tá-yeng conducts, under the orders of the Tsoún-tú, all civil matters which occur at any place subject to the jurisdiction of the Tsoún-tú. The Phan-tá-yeng takes charge of all the revenue collected therein, and disburses pay to the military when ordered by the Tsoún-tú. The Khô-tá-yeng examines and tries all criminal offences committed within the same extent of jurisdiction. The Nyo-tá-yeng collects the land and salt taxes. The three officers, Tshein-tá-lô-yê, Tshan-tá-lô-yê and Lô-tá-ló-yê have jurisdiction within the city of *Yunan* only, in which they conduct the revenue and judicial duties. The royal teacher, LI'-TAN, examines all men within the Tsoún-tú's jurisdiction who come to him, as to their learning and skill in archery, and in the musket, sword and lance exercises, and reports whether they are qualified for the public service, or not.

The royal elephants joined the mission at *Yunan* on the 16th October, and on the following day the Burmese envoys waited on the Tsoún-tú and communicated to him the two subjects comprised in their instructions from *Ava*. The envoys requested the Tsoún-tú to solicit the Emperor to put a stop to the difference which exists between MAHA'-WENG and MAHA'-NUE the *Thin-ví* or Shan chiefs of *Kyain Youn-gyíh*, (a town 8 days journey to the east of *Kyain-toun*, situated on the great Cambodia river and on the frontiers of *China*, the chiefs of which pay tribute to both *Ava* and *China*.) The envoys also requested the Tsoún-tú to make certain subjects of *China*, who had worked the royal silver mines at *Bó-duen* during the years 1829, 1830, 1831, and 1832, to pay up the balance of the duty they owe the king of *Ava*. The duty was upwards of 200 *viss*, but these men had only paid 30 *viss* and had gone off to the towns of *Tshú-shyoún Táli* and *Mó:myin*.

The envoys sent back from *Yunan* the elephanteers and men whom the governor of *Ba-mó* had ordered to accompany the mission so far. Chinese were appointed by the Tsoún-tú, agreeably to ancient custom, to take charge of the elephants. The

mission now consisting of the four envoys and their thirty followers, besides two men acquainted with the Chinese language, whom the Governor of *Ba-mô* had attached to the envoys, left *Yunan* on the 21st of October 1833, attended by the undermentioned Chinese appointed by the Tsoún-tú to take charge of the mission. Two military officers, Kue-tá-yeng who had a red button, and Tsú-tá-lô-yê who had a blue button; and two civil officers, Tsheng-tá-lô-yê who had a blue button, and Teng-tá-lô-yê who had a transparent white button; and 8 subordinate officers, Ti-tá-lô-yê, who had a white button, and Tshue-tá-lô-yê, Shya-ló-yé, Tsoun-ló-yé, Mo-wé-lô-yê, Houn-lô-yê, Thoun-lô-yê, and Han-lô-yê, each of whom wore a brass button.

Date.	Names of places.	Taings.	Remarks.
21st. Oct. 1833.	Left the city of *Yunan*, and slept at the village of *Wún-khyauk*, ...	5	
22nd.	Slept at the village of *Yan-leit*, ...	7	We learnt from PYENG-TA'-LO'-YE the governor of this place, and some men of rank, who came and paid us a visit, that this town had consisted of upwards of 2,000 houses, but that at 9 o'clock on the morning of the 6th September last, an earthquake had completely destroyed the place, leaving not a single house or shed standing, and killing upwards of 1,000 of the inhabitants.
23rd.	Slept at the village of *Yi-loún-tsán*,	9	
24th.	Slept at the city of *Má-loun-chow*, *(Mulong,)*	7	The walls of this city are 6,300 cubits in circumference and 10 cubits high, with a gateway on each of the 4 sides. The name of the governor is Lhyó-tá-lô-yê.
25th.	Slept at the city of *Shyáyi-chow*, ..	5	The walls of this city are 4,900 cubits in circumference and 9 cubits high, with a gateway on each of the 4 sides. Lhyó-tá-lô-yê is the governor.
26th.	Slept at the village of *Pê-shue*, ...	7	
27th.	Slept at the city of *Pyeng-yeng-hien*,	6	The walls are about 4,900 cubits in circumference and 5 cubits high, and has a gateway on the east, west and south faces, but none on the north. The governor is Tsán-tá-lô-yê.
28th.	Slept at the village of *Yi-za-khoún*,	7	
29th.	Slept at the village of *Yó-kuon-tengtsan*, ...	7	
30th.	Slept at the village of *Shyan-tsain*, ..	7	
31st.	Slept at the village of *Pê-shyá-ti*, ..	4	
1st Nov.....	Slept at the village of *A-tú-teng*,....	6	
2nd.	Slept at the city of *La-taing*, ...	6	The walls are upwards of 2,800 cubits in circumference and 10 cubits high, with 1 gateway on each of the four sides. The governor is Tsheng-tá-ló-yê.
3rd.....	Slept at the village of *Bó-koun*, ...	6	
4th.	Slept at the city of *Tsein-leng-chow*, *(Tchin-ning ?)*	6	The walls are upwards of 4,900 cubits in circumference and 12 cubits high, with 1 gateway on each of the 4 sides. Tshauk-tá-lô-yê is the governor.

Date.	Names of places.	Taigns.	Remarks.
5th. Nov. 1833.	Slept at *An-shue-fú, (Ngan-chan ?)*	6	The walls are about 7,000 cubits in circumference and 10 high, with 1 gateway on each of the 4 sides. Kyeng-tá-lô-yê & Tshein-lô-yê are the governors.
6th.	Slept at the city of *Ngan-pyeng-hien,*	8	The walls are 4,900 cubits round and 10 high with 1 gateway on each of the 4 sides. Tsó-tá-lô-yê is the governor.
7th.	Slept at the city of *Tsheng-tsein-hien,*	6	The walls are about 1,400 cubits round and 10 high, with gateways on each of the 4 sides. Myen-tá-lô-yê is the governor.
8th.	Slept at the city of *Kue-chow, (Koei-ngang ?)*	8	The walls are about 10,500 cubits round and 15 high, with 4 gateways on the north face, 2 on the east, 1 on the south, and 2 on the west. The officers here are Tsoún-tá-yéng, a military officer and 4 governors, Lán-tá-yéng, Tsán-tá-yeng, Lhyó-tá-lô-yê and Tsán-tá-lô-yê. The Tsoún-tú of *Yunan* has jurisdiction in all civil, criminal, and revenue affairs, in all places subject to both *Kue-chow* and *Yunan* cities; but he has no power in military affairs, which are superintended by the military officers Tí-tá and Tí-taik. The officers of the Tsoún-tú only disburse the pay of the military. The mission stopped at this city one day.
10th.	Slept at the city of *Loún-lí-hien,*	6	The walls are about 600 cubits round and 10 high, with 1 gateway on each of the 4 sides. Pá-má-tsoún is the governor. The mission stopped here a day as the porters with the baggage had not come up.
12th.	Slept at the city of *Kue-tein-hien,* ..	7	The walls are about 3,500 cubits round and 8 high, with one gateway on each of the 4 sides. Tsauk-tá-lô-yê is the governor.
13th.	Slept at the village of *Lhyó-yan-tsán,*	6	
14th.	Slept at the city of *Yeng-pyeng-hien,*	8	The walls are about 6,300 cubits round and 10 high, with one gateway on each of the 4 sides. Yan-tá-lô-yê is the governor.
15th.	Slept at the city of *Khan-pyeng-chow, (Koang-ping ?)*	7	The walls are upwards of 4,900 cubits round and 5 high, with 1 gateway on each of the 4 sides. Shyeng-tá-lô-yê is the governor.
16th.	Slept at the city of *Tsí-pyeng-hien,* ..	7	The walls are about 5,600 cubits round and 12 high, with 1 gateway on each of the four sides. Tsán-tá-lô-yê is the governor.
17th.	Slept at the river's side in the city of *Tsein-yuón-fú, (Tchin-yuen,)*.....	7	The walls are about 7,000 cubits round and 12 high, with 1 gateway on each of the 4 sides. Tsán-tá-lô-yê is the governor. The mission stopped here 3 days preparing boats and embarking in them.

Date.	Names of places.	Taings.	Remarks.
20th Nov. 1833.	Dropped down the stream in boats from *Tsein-yuón-fú* and stopped at the city of *Tshí-tshein-hien*, ...	6	The walls are 4,900 cubits round and 14 high, with 1 gateway on each of the 4 sides. Shyen-tá-lô-yê is the governor.
21st.	Slept at the chokey of *Tá-yí-tán*, ..	9	
22nd.	Slept at the village of *Pyan-shue*, ..	10	
23rd.	Stopped at the city of *Yí-pyen-hien* and received provisions,.....	7	The walls are 5,600 cubits round and 7 high, with 1 gateway on each of the 4 sides. Lhyó-tá-lô-yê is the governor.
..	Slept at the city of *Yuón-tsó-fu*, ...	3	The walls are 7,000 cubits round and 9 high, with a gateway on each of the 4 sides. There are a great many small villages dependent on this city. It has 3 governors, Tsoún-tá-lô-yê, Phu-tá-lô-yê and Lí-tá-lô-yê.
24th.	Left *Yuón-tsó-fú* at 3 o'clock in the afternoon, and dropped down as far only as the chokey village of *Kyín-leng-dan*, ...	3	
25th.	Slept at the city of *Khyay-ya-hien*, ..	10	The walls are 4,900 cubits round and 6 high, with 2 gateways on the south side and one only on each of the other sides. Tsoún-tá-lô-yê is the governor.
26th.	Slept off the landing place at the village of *Tshí-tshí*, ...	9	
27th.	Slept at the village of *Shyeng-yí-wun*, ...	16	
28th.	Slept at the city of *Tseng-kyí-hien*, ..	13	The walls are 4,200 cubits round and 9 high, with 1 gateway on each of the 4 sides. Taik-tá-lô-yê is the governor.
29th.	Slept at the city of *Lú-kyí-hien*, ...	8	The walls are 4,200 cubits round and 8 high, with 1 gateway on each of the 4 sides. Lyéng-tá-lô-yê is the governor.
30th.	Slept at the city of *Shyeng-tsó-fú, (Tching-tcheou ?)*	6	The walls are 8,400 cubits round and 10 high, with 4 gateways on the south side and 1 only on each of the other 3 sides. Wun-tá-lô-yê is the governor.
1st Dec.	Slept at the village of *Kaing-shyo*,..	17	
2nd.	Slept at the village of *Tsoún-seh*,....	15	
3rd.	Reached the city of *Tshan-tek-fú, (Tchang-té,)*	6	The mission disembarked from the boats and remained here during the 4th Dec. making arrangements for prosecuting their journey by land.
5th.	Proceeded by land and slept at the village of *Tá-loun-tsan*, ...	6	
6th.	Slept at the village of *Tsí-Khuá-yí*,..	6	
7th.	Slept at the city of *Lí-chow*,.....	6	The walls are 8,400 cubits round and 9 high, with two gateways on the western, and only one on each of the other three sides. Tshein-tá-lô-yê and Tsán-tá-lô-yê are the governors. The mission stopped here three days, as the porters with the baggage had not come up.
10th.	Slept at the village of *Shue-leng-yeng*,	6	The mission was detained at this village a day, a relief of porters not being immediately procurable.

Date.	Names of places.	Taings.	Remarks.
12th Dec. .. 1833.	Slept at the city of *Koun-gun-hien*, ..	8	The walls are 5,250 cubits round and 7 high, with 1 gateway at each of the 4 sides. Tsú-tá-lô-yê is the governor. The mission was detained here a day, in consequence of the porters with the baggage not having come up.
14th.	Slept at the village of *Tshuon-léng-ye*,	5	
15th.	Slept at the city of *Kyeng-tsó-fú, (Kin-tcheou,)*	6	The walls are 21,000 cubits round and 10 high, with 2 gateways on each the eastern and western sides, and one only on each of the other two sides. Tsán-tá-lô-yê, Tsheng-tá-lô-yê and Lhyó-tá-lô-yê are the governors. The walls of this city are very handsomely and properly built, and the ditch surrounding them is full of water, on which we saw a great many boats plying. The Mission was detained here a day, in consequence of the porters with the baggage not having come up.
17th.	Slept at the village of *Kyeng-yeng-ye*,	9	The Mission was detained in this village 2 days in consequence of a great fall of snow which had covered the roads and made them impassable.
20th.	Slept at the city of *Kyeng-mein-chow, (Kinmen,)*.....	9	The walls are 4,900 cubits round and 9 high, with 2 gateways on the southern, and 1 only on each of the other three sides. Lú-tá-lô-yê is the governor. The Mission was detained here a day, in consequence of the porters not having come up with the baggage.
22nd.	Slept at the village of *Shí-Khyauk*,..	6	
23rd.	Slept at the village of *Leng-yan-yê*, .	6	
24th.	Slept at the city of *Yí-tshein-hein*, ..	9	The walls are 4,900 cubits round and 8 high, with one gateway on each of the 4 sides. Tshauk-tá-lô-yê is the governor.
25th.	Slept at the city of *Thuon-tshéng, (Syang-yang,)*	9	The walls are 10,500 cubits round and 12 high, with one gateway on each of the 4 sides. Weng-tá-yeng and Gsueug-yeng are the governors. In consequence of the whole of the country between the cities of Tshan-tek-fú and Thuon-tshéng having been destroyed by an inundation in the year 1829, great difficulty is now experienced there in procuring post horses and porters. The Mission was repeatedly obliged to wait, and was unable to travel the distance between the two cities in less than 22 days, although the same journey formerly occupied only 12 days. The officers, appointed by the Tsoun-tú of *Yunan* to escort the mission, here stated, that they had received letters, ordering them to make all haste, as the feast of Lanthorns in the month of February was near at hand, and they requested that, in order to facilitate the journey, the Burmese envoys should each proceed in a covered chair, having a *Lô* (mule), harnessed to it before and another behind. The mission stopped at this city 6 days, and hired 50 sumpter-horses and mules at 50 ticals each, to convey the presents and baggage, leaving the lighter articles only to be carried by porters.
1st Jan. .. 1834.	Left the city of *Thuon-tsheng* in covered chairs with large horses, and stopped at the village of *Lhyó-yeng-yi*, ...	6	
2nd.	Stopped at the city of Yi or *Ri-hien*,	6	The walls of this city are 4,200 cubits round and 10 high, with 1 gateway on each of the 4 sides. Wún-tá-lô-yé is the governor.
3rd.	Slept at the village of *Wá-teng*, ...	6	

Date.	Names of places.	Taings.	Remarks.
4th Jan. .. 1834.	Slept at *Nan-yan-fú (Nanyang)*,....	6	The walls are 7,000 cubits round and 12 high, with 1 gateway on each of the 4 sides. Yéng-tá-lô-yê and Shyauk-tá-yéng are the governors.
5th.	Stopped at the village of *Tseng-teng*, in consequence of the porters with the baggage not having come up,	3	
6th.	Slept at the village of *Tsó-hô*, ...	6	
7th.	Stopped at the city of *Yi-chow*, being unable to proceed in consequence of a fall of snow, *(Yu ?)*	4	The walls are 4,900 cubits round and 14 high, with 1 gateway on each of the 4 sides. Tsoún-tá-lô-yê is the governor.
8th.	Slept at the village of *Kyó-sheng*, ..	9	
9th.	Stopped at the city of *Yuí-hien*, the porters with the baggage not having come up,.....	3	The walls are 4,200 cubits round and 9 high, with one gateway on each side. Lô-tá-lô-yê is the governor.
10th.	Slept at the city of *Shan-hein*, ...	6	The walls are 10,500 cubits round and 11 high, with 2 gateways on the eastern, and one only on the 3 other sides. Tsán-tá-lô-yé is the governor.
11th.	Slept at the city of *Tshan-kó-hien*, ..	11	The walls are 3,500 cubits round and 9 high, with 1 gateway on each side. Wún-tá-lô-yê is the governor.
12th.	Slept at *Sheng-tseng-khyeng*, ...	6	The walls are 9,300 cubits round and 8 high, with 1 gateway on each of the 4 sides. Tsán-tá-lô-yê is the governor.
13th.	Slept at the city *Tseng-chow,(Tching?)*	10	The walls are 7,000 cubits round and 7 high, with a gateway on each of the 4 sides. Ló-tá-lô-yê is the governor.
14th.	On leaving *Tseng-chow* we found the *Whún-ho (Ho-ang-ho)* river was frozen, and being unable to proceed by the same route as that travelled in the year 1823 by the present governor of *Ba-mó*, we deviated to the north-west and stopped at the city of *Yoún-yán-hien*, ...	7	The walls of this city are 3,500 cubits round and 8 high, with one gateway on each of the 4 sides. Tseng-tá-lô-yê is the governor.
15th.	Stopped at the city of *Hú-lô-kuon* to change post-horses and porters,..	4	The walls are 9,800 cubits round and 8 high, with 1 gateway on each of the 4 side. Wún-lá-lô-yê is the governor.
Ditto,.....	Slept at the city of *Koun-hien*, ...	4	The walls are 8,400 cubits round and 8 high, with 1 gateway on each of the 4 sides. Koun-tá-lô-yê is the governor.
16th.	Slept at the city of *Yun-tsé-hien*.,....	6	The walls are 4,200 cubits round and 9 high, with 1 gateway on each of the 4 sides. Lí-tá-yeng is the governor.

Date.	Names of places.	Taings.	Remarks.
17th Jan. .. 1834.	Slept at *Moún-hien*,.....	6	The walls are 7,000 cubits round and 12 high, with 1 gateway on each of the 4 sides. Hú-tá-lô-yê is the governor.
18th.	Stopt at the city of *Huaik-kyeng-fú* to change horses and porters,*(Hoai-king?)*	6	The walls are 7000 cubits round and 12 high, with 1 gateway on each of the 4 sides. Wún-tálô-yê is the governor.
Ditto,.....	Slept at the city of *Tsán-fú*,.....	4	The walls are 5,600 cubits round and 10 high, with 2 gateways on the eastern and 1 on each of the other 3 sides. Shyán-tá-lô-yê is the governor.
19th.	Stopt at the city of *Tsheng-huá-yi* to change horses and porters, ...	3	The walls are 2,100 cubits round and 8 cubits high, with an arched gateway of brick having a double-roofed shed over it on each of the 4 sides. Hô-ní-hien is the governor.
Ditto, ...	Passed the city of *Tit-su-hien*, ...	8	The walls are 21,000 cubits round and 10 high, with an arched gateway of brick covered by a double-roofed shed on each of the 4 sides. The walls have also parapets of brick.
Ditto,.....	Slept at the city of *Hô-yá-hien*, ...	2	The walls are 17,500 cubits round and 13 high, with 1 gateway on each of the 4 sides. Shyá-tá-yê is the governor.
20th.	Stopt at the city of *Shyeng-nán-hien*, to change horses and porters, ...	2	The walls are 6,300 cubits round and 12 high, with 1 gateway on each of the 4 sides. Tsú-tá-la is the governor.
Ditto,.....	Slept at the city of *We-kue-fú*, *(Ouekiun?)* where we joined again the road which the governor of *Ba-mô* travelled in 1823, ...	5	The walls are 7,000 cubits round and 13 high, with a gateway on each of the 4 sides. Lyan-tá-lô-yê and Tshein-ta-lô-yê are the governors.
21st.	Stopt at the city of *Khyí-hieng*, 2 taings distant from the above, ...	..	The walls are of mud with brick parapets. They are 7,000 cubits round and 2 high, with an arched gateway of brick, covered by a double-roofed shed on each of the 4 sides.
Ditto,.....	Passed through the city of *Tsan-tek-fu*, *(Tchang-te,)*	..	The walls are 6,300 cubits round and 12 high, with 1 gateway on each of the 4 sides. Hú-tá-lô-yê and Tsán-tá-lô-yê are the governors.

[There is some mistake here. The Mission of 1823-24 reached *Tsan-te-fu* on the second day after leaving *We-kue-fú*, and passed the village of *Yí-koun* before coming to *Tsan-tek-fú*.]

Date.	Names of places.	Taings.	Remarks.
21st Jan. .. 1834.	Passed the figure of a *Nat* 70 cubits high within a 4 roofed building, and having a figure of DIPENGARA BUDDH on its head, ½ a taing distant from the above, ...	..	
Ditto, ...	Slept at the village of *Yí-koun*, distant from *We-kue-fú*, ...	12	
22nd.	Passed through the city of *Tsan-chow*,	..	The walls are 6,300 cubits round and 10 high, with 1 gateway on each of the 4 sides. Lyó-tá-lô-yê is the governor.
Ditto, ...	Slept at the village of *Oun-lô-kyeng*, distant from *Yí-koun*, ...	11	
23rd.	Slept at the city of *Han-tan-hien*, ...	10	The walls are 4,900 cubits round and 12 high, with 1 gateway on each of the 4 sides, and Youn-tá-lô-yê is the governor.
24th.	Stopt at the city of *Youn-leng-hien*, to change horses and porters, ...	5	The walls are 5,600 cubits round and 12 high, with 1 gateway on each of the 4 sides, and Hô-tá-lô-yê is the governor.
Ditto, ...	Passed through the city of *Shya-hôk-hien*, ...	3	The walls are 4,900 cubits round and 9 high, with 1 gateway on each, of the 4 sides, and Yuéng-tá-lô-yê is the governor.
Ditto, ...	Slept at the city of *Yuon-tek-fú*, (*Chun-ti ?*)	5	The walls are 7,000 cubits round and 12 high, with 1 gateway on each of the 4 sides. T,hán-tá-lô-yê is the governor.
25th.	Passed through the city of *Nue-shyú-hien*, ...	6	The walls are 5,000 cubits round and 12 high, with 1 gateway on each of the 4 sides, and Lyó-tá-lô-yê is the governor.
Ditto, ...	Slept at the city of *Pô-shya-hien*, ..	6	The walls are 3,500 cubits round and 7 high, with 1 gateway on each of the 4 sides, and Nyó-tá-lô-yê is the governor.
26th.	Stopt at the city of *Tsauk-chow*, to change horses and porters, (*Tcha ?*)	6	The walls are 14,000 cubits round and 14 high, with 1 gateway on each of the 4 sides, and Teng-tá-lô-yê is the governor.
Ditto, ...	Slept at the city of *Luon-tshoun-hien*,	6	The walls are 10,500 cubits round and 12 high, with 1 gateway on each of the 4 sides, and Hú-tá-lô-yê is the governor.
27th.	Slept at the city of *Tseng-tein-fu*, (*Tchung-ting,*)	6	The walls are 10,500 cubits round and 13 high, with 1 gateway on each of the 4 sides, and Li-tá-lo-yê is the governor.

Date.	Names of places.	Taings.	Remarks.
28th Jan. .. 1834.	Stopt at the city of *Teng-chow*, to change horses and porters, *(Ting,)*	3	The walls are 8,400 cubits round and 13 high, with 1 gateway on each of the 4 sides, and Hú-tá-lô-yê is the governor.
Ditto,.....	Passed the city of *Wún-tu-hien*, ...	6	The walls are 14,000 cubits round and 10 high, with 1 gateway on each of the 4 sides, and Yó-tá-lô-yê is the governor. (The route of the mission of 1787 makes this place much more distant from *Tsengtein-fú*.—B.)
Ditto,.....	Slept at the village of *Myeng-yi-teng*,	3	
29th.	Slept at the village of *Puon-tsheit-khyó*, ...	12	
30th.	Slept at the city of *Pauk-teng-fú* where a *Tsoún-tú* resides *(Pao-ting)*	6	The walls are 7,000 cubits round and 12 high, with 1 gateway on each of the 4 sides. Tshi-hauk-yê is the Tsoún-tú, and Tshein-tá-lô-yé and Oun-tá-lô-yê are the governors.
31st.	Stopt at the city of *Ngan-shyú-hien* to change horses and porters *(Ngan ?)*	5	The walls are 5,600 cubits round and 7 high, with 1 gateway on each of the 4 sides, and Tshein-tá-lô-yê is the governor.
Ditto,.....	Slept at the village of *Pe-khó*, ...	6	
1st Feb.	Passed through the city of *Teng-tsí-hien*, ...	2	The walls are 8,400 cubits round and 7 high, with 1 gateway on each of the 4 sides, and Lyó-tá-lô-yê is the governor.
Ditto, ...	Slept at the city of *Tsue-chow*, (*Tsotcheon ?*).....	7	The walls are 10,500 cubits round and 13 high, with 2 gateways on the eastern, and 1 on each of the other 3 sides, and Tshauk-tá-lô-yê is the governor.
2nd.	Slept at the city of *Leng-yan-hien*, ..	7	The walls are 7,000 cubits round and 10 high, with 1 gateway on each of the 4 sides, and Tsheín-tá-lô-yê is the governor.
3rd.	Reached the city of *Pê-kyín*, the residence of the emperor of *China*, (*Pekin,*).....	10	

"From the city of *Mō:myín* to *Pekin*, there is a fortified *chokey* or post, with an officer at every *taing* or half *taing* of the road as considered necessary; and from a distance of 10 days before you reach *Pekin* to that city, there is at intervals of one quarter of a *taing*, and between every two chokies, a small building with a centinel on duty. At each chokey the

guard of four or five men came out to receive us, when we arrived there, and fired five guns. At every large town where we were to stop for the night, a party of 5 or 600 armed men came outside of the town to meet us, and fired three vollies with 50 or 60 muskets, and in these towns three guns were fired on our arrival at night, and departure in the morning. At each stage we were furnished with horses, boats, porters, &c. at the expence of the town, and officers of the government conducted us from one stage to another, as far as their jurisdiction extended.

"Including the (inner) wall of the palace enclosure, there are three lines of brick wall on the eastern, western and northern sides of the city of *Pekin*, and four on the southern. The line of wall outermost* is 28,000 cubits square and 20 high, with four gateways on the eastern and western, six on the southern, (apparently including the gateways in the southern wall of the Tartar city) and two on the northern side. In the middle† line of wall there is one gateway on the eastern and western, and four on the southern side (apparently one within the other). In the inner wall of the palace enclosure there is one gateway on each of the four sides. The middle wall is 10 cubits high, and the wall of the palace enclosure 13 cubits. There are battlements on the outermost, and on the inner wall of the palace enclosure, but none on the middle line of wall, which is covered with yellow tiles. The gateways in the outermost, and in the inner wall of the palace enclosure are of brick arched, with sheds of three roofs over them; and those of the middle wall have sheds of plain square roofs only over them. There is a tower at the four angles of the outer wall. There is a ditch full of water surrounding the outer wall; another between the outer and middle walls; another between the middle and palace enclosure walls; and a fourth inside of the palace enclosure wall.

"The palace of the emperor consists of a brick terrace with posts, over which is placed a double roof, the upper part of which is square and covered with yellow tiles.

"The age of the emperor is 52 years, of which he has reigned 17 years. He has seven queens, but his principal queen is dead. He has one son eight years old, and another four years old. He has two daughters also by one queen. One daughter fifteen and the other ten years of age. He has two younger brothers by a different mother.

"The emperor entrusts the superintendence and direction of public affairs to the following officers. All affairs relating to the interior (palace) are superintended by three men, *Shyan-tā-yeng*, *Tshan-tā-yeng*, and *Shyi-tā-yeng*, who reside at the *Nue-we-pū* brick building. The business outside of the palace is thus carried on. War and military affairs are under the superintendence of the *Pyin-pū-tā-yeng*. The *Lā-pū-tā-yeng* takes

* Both the Tartar and Chinese city appear to be here included.

† This appears to be the external wall of the palace enclosure.

charge of ambassadors and receives the reports of all *Tsoŭn-tūs* and military and civil officers, and after examination, submits the same to the emperor and issues the necessary replies. The *Koun-pū-tā-yeng* superintends persons employed on public works or service.

"The *Shyeng-pū-tā-yeng* inquires into and decides on criminal affairs. The *Kyō-meín-tī-tū* has no business; but the gates of which he had charge have been placed under the *Lī-pū-tā-yeng*. The *Hu-pū-tā-yeng* superintends the public lands and revenues and the census of the population. The *Li-pū-tā-yeng* superintends the ceremony of doing homage to the emperor. There is no *Yoŭn* or *Lhuot-tô* (court of justice or council chamber of ministers), but each chief examines and issues his orders, and then reports to the *Tū-yeng* of the interior, who submits the same to the emperor. The *T'hī-pū-tā-yeng*, who superintend affairs outside, are called within the palace, whenever the emperor has occasion for them. The following is a list of the governors and military officers at a distance from the capital. There are ten civil officers. The *Tsoŭn-tū*, the *P'hū-taik*, the *Lyăn-taung*, the *Lyīn-taung*, the *An-tsha-tshīn*, the *Pū-teng-tsīn*, the *T'hauk-taik*, the *Phū-khueng*, the *Tsō-khueng*, and the *Shyeng-khueng*. There are ten military officers also. The *Tí-tú*, *Tsí-taik*, *Shyīn-taik*, *Tshan-kyan*, *Yō-kyi*, *Tū-tsīn*, *Shyō-pe*, *T'sheng-tsoŭn*, *Pa-tsoŭn*, and *Waik-we*. Under one *Tsoŭn-tū* there are two *P'hū-taik*, civil officers, and two *Ti-tú*, military officers, and subordinate officers without number. The *Tsoŭn-tū* and the civil officers and governors take cognizance of crimes, thefts, fires, lawsuits and revenue matters. The *Títú* and the military officers superintend the military and their affairs. There are seven kinds of distinction on the top of the head-dress (buttons) copper, white-coloured, glass, opaque blue-coloured, transparent blue-coloured, opaque red, and transparent red-coloured. The civil officers *Tsoŭn-tū* and *P'hu-taik*, and the military officer *Tí-tú* have transparent red buttons, and the subordinate officers of different colours according to their different ranks. The *Tsoŭn-tū* and all the civil officers wear a long robe with the figure of a bird worked in gold thread on the breast and back. The *Tí-tú* and some of the military officers wear a long robe with the figure of a lion worked in gold thread on the breast and back, and some with the figure of a Tiger or of a *To* (fabulous animal) on the breast and back. The musqueteers wear a blue jacket reaching to the waist, with a border of red two fingers in breadth, and some Chinese letters in white on the breast and back. The musqueteers and lancemen also wear the figure of a *Bhi-lu's* head (monster's) or of a tiger's head on their head-dress. The feathers of peacocks are not conferred upon officers according to their situations. They are given to military officers only, to men near the emperor who may have distinguished themselves in any action and pleased the emperor. All the civil and military officers of towns and villages come once in three years to *Pekin*. No presents are allowed to be taken from any of the towns and villages, but the emperor gives a monthly salary in silver to every officer according to his situation.

"We did not see any images or pagodas connected with BUDDH, his precepts and disciples, sculptured or built, and worshipped by the inhabitants of *China*. We only saw in every town and village, buildings dedicated to *Nats*, and large images of *Nats*, before which buffalos, bullocks, goats and hogs were killed and sacrificed. The Chinese priests wear trowsers and jackets of black, blue or yellow colours, and shave the hair of their heads, and wear caps. They eat at night, but have no wife or children. They do not drink spirituous liquors and do not study books. They guard the buildings dedicated to Nats, and the figures of *Nats*, day and night, and after sweeping the floor or ground clean, they burn lights at night before the figures of the *Nats*, and remain in attendance; and when the inhabitants of the country kill buffaloes, cows, goats and hogs, and offer them in sacrifice, the chief of the priests superintends and directs the ceremony.

"Children learn to read by paying money to a teacher. From *Luay-laing* chokey to *Pekin*, all the towns and villages on our road presented us with money and clothes agreeably to former custom. On our arrival at *Pekin* we delivered the royal letter and presents and had audiences of the emperor, and he gave us presents. These particulars, with the days on which they occurred and the quantity of presents we received, having been already reported, (in separate letters to the king and ministers, of which I still hope to procure copies) they are omitted here, and only a description of the different towns we saw in our journey, and of the city of *Pekin*, and an account of the military and civil officers and of their dress are inserted.

"We left *Ava* on the 27th June, 1833, reached *Pekin*, the residence of the emperor of *China* on the 3rd February, 1834. We remained at *Pekin* 32 days and left it on the 6th of March, with the letter from the emperor, his presents of cloth for the king and queen of *Ava*, and the letter addressed by the ministers of the emperor, to the *Lhuot-tô* at *Ava*. We returned by the same route as that by which we went to *Pekin*, and arrived at *Yunan* in a certain number of days, and remained there for some days, whilst the *Tsoŭn-tū* prepared his letter for the *Lhuot-tô* at *Ava*. We then came to *Mō-myín*, and having written a petition for the king and a letter for the ministers of *Ava*, we inserted these documents into bamboos covered with red cloth, and sealing them carefully, delivered them to the governor of *Mō:myín* for the purpose of being forwarded to the governor of *Ba-mô*, who transmitted them to *Ava*. We requested that governor also to send a party to meet us at the chokey of *Luay-laing* and escort us in safety agreeably to former custom. From *Mō:myín* to *Luay-laing* we were escorted by a party of musqueteers with a suitable officer, and the Tsô-buáhs and chiefs of the eight Shan cities conveyed to *Ba-mô* the emperor of China's letter and presents, and all our baggage."

V.—*On a new genus of the Plantigrades. By* B. H. HODGSON, *Esq.*

In your 52nd No., for April 1836, I described, summarily but carefully, fourteen new animals of this kingdom, including, with those priorly, described by myself in various numbers of your Journal, and in the Society's Transactions, all the mammals then known to me as inhabitants of *Nepal**, of which descriptions had not been given by others. To General HARDWICKE, science is indebted for an account of the Ghoral antelope, and of the yellow-necked marten: to Messrs. VIGORS and HORSFIELD, for an account of the Nipalese Cat. But I am not aware that any more mammals of *Nepal* had been given to the world, when I commenced the task of recording them; and I believe I have added essentially to the correctness of the descriptions of those three. The *Mulsampra* or yellow-necked marten (of BODDAERT, by the way, originally) had always been stated to be a *mustela* merely. By the examination of its skull I ascertained that it belonged to the subgenus *Martes*. In like manner, the *Nemorhædine* Ghoral had been alleged to have suborbital sinuses—a mistake which I corrected. This gradual emendation of the record of species is the necessary fruit of continuous attention; a fruit that ripens slowly with the recurring sunshine of opportunity; for, with so many things to note in every animal, it is odds but the specimen or the observer will be wanting somewhere, if there be no room or inclination for reiteration. I speak apologetically for myself, and, on the present occasion, purpose to correct some errors and deficiencies in the descriptions of No. 52 of your Journal.

Two animals are there described by the names of *Gulo Nipalensis*, and *Gulo Urva*. The latter proves not to be a *Gulo*, but an osculant new form between *Herpestes* and *Gulo*, which, I shall now endeavour to do justice to, previously amending the statement of the colors of the former as follows.

Gulo Nipalensis, nobis. Glutton, above, saturate glossy brown; below, with a dorsal line extending from the middle of the head nearly to the hips; a transverse band drawn obliquely across the brows to the middle of the cheeks; and the terminal third of the tail, brilliant orange yellow. Superior and inferior colors strongly contrasted, occupying the lateral as well as inferior aspect of the head, but the inferior only of the face, neck and body. Edge merely of the upper lip, paled: inner margin of the ears the same, and both concolorous

* See the recent Systematic Catalogue transmitted to the Curator of the Museum. It contains 98 species and varieties, of which 45 are, I believe, new.

with the lower surface: a dark small patch behind the gape, on either cheek: fore limbs, paled, internally to the wrists, and frequently spreading over the digits: hind, only to the oscalcis or less. Four teats placed in a parallelogram, in the posteal region of the belly; two of them, inguinal, and two ventral. In young animals, and in the winter dress of mature ones, the dark superior surface is earthy grey brown, and the pale inferior, as well as the marks above, canescent; the dark moustache is also wanting.

Tribe PLANTIGRADES. Genus *Urva*, nobis.

Character. Teeth as in the Genus *Herpestes*. Structure and aspect precisely mediate between *Herpestes* and *Gulo*, subvermiform and digito-plantigrade. Snout elongated, sharpened and mobile. Hands and feet largish; with the digits connected by large crescented membranes. Sole and palm nude. Hind feet clad half-way from the os calcis. Nails subequal before and behind, *Gulo-herpestine*. On either side the anus a round, hollow, smooth-lined gland secreting an aqueous fœtid humour which the animal squirts out posteally with force. No subsidiary glands, nor any unctuous fragrant secretion. Teats six, remote and ventral. Stomach purely membranous, without neck or fundus. A short blunt cœcum of equal diameter with the great gut. Orbits incomplete*.

Habits. Cancrivorous and ranivorous; dwelling in burrows in the valleys of the lower and central hilly regions of *Nepal*.

Type. *Gulo Urva*, of the Journal No. 52 for April 1836. *Urva cancrivora hodie*, nobis. Affinities various, closest with *Herpestes* and *Gulo*, connecting *Mydans*, *Mephitis* and *Ursitaxus*, on one hand, and *Herpestes* and *Viverra* on the other, and forming a singular link between the odoriferous and fœtid genera of the *Digitigrade* and *Plantigrade* Tribes; its obvious station being at the end of the one, or at the beginning of the other tribe.

Color. That of the jackal or fulvous iron grey, darker and embrowned on the inferior surface of the neck and on the chest. Limbs black brown. A white stripe on either side the neck from ear to shoulder. Edge of the upper lip and the whole lower jaw canescent. Terminal half of the tail rufous yellow. Fur of two sorts, very ample and laxly

* Some of these marks of our genus, or subgenus, are, I am aware, only significant by their combination with others. And, as to their number, it appears to me that we shall only reach the more intimate affinities of the mammals by carrying into this department of Zoology a portion of the precision and minuteness which have been applied to the Ornithological department.

set on; the exterior, quadrannulated from the base with hoary or fulvous and with black; the interior, dusky at the base, fulvous upwards.

Structure and Size.	*Feet.*	*Inch.*
Tip of snout to root of tail (dorsal),	1	6
Length of head (snout to jut of occiput straight),	0	4
Tail only,	0	11
Tail and terminal hair,	1	11
Snout to fore angle of the eye,	0	1¾
Thence to base of ear (lobe),	0	1¾
Girth of body, behind shoulder,	0	8
Mean height,	0	8
Elbow to tip longest finger,	0	5¾
True knee to tip longest toe,	0	7⅞
Top wrist to base finger (superior),	0	1⅞
Longest finger,	0	1⅝
Its nail (straight),	0	0½
Jut of os calcis to base long toe (superior),	0	2¾
Longest toe,	0	1⅝
Its nail (straight),	0	0½
Length of external ear (vertical),	0	1¾
Its free exsertion from the head, or depth of the helix,	0	0 7/16
Weight of the animal,	4 lbs.	

It is impossible to describe the general and particular external conformation of this animal more precisely than by saying that they are *Gulo-herpestine,* reference being had to the more slender-bodied species of the former genus, such as *Orientalis* and *Nipalensis.* In *Herpestes,* the structure is more vermiform, with greater length of tail and of neck, (palpably noticeable in the skeletons;) and the hands and feet are shorter in proportion to the leg and arm, the metacarpi and metatarsi being more compactly knit. In *Gulo* as before limited, the bulk of the body and length of the neck, agree with those of our animal; but the tail is shorter; the anterior limbs heavier and their talons more decidedly fossorial; the agreement in these latter respects being closer with *Herpestes,* and indeed, almost identical in reference to the *proportional* strength and size of the anterior and posterior extremities, with their digits and talons. The talons, however, are, in our animal, more fossorial, that is, blunter and stronger, than in *Herpestes.* In the general contour of the cranium, and in the number, position and character of the teeth, *Urva* agrees with *Herpestes,* with the two following marked differences, and approximations of our animal to *Gulo,* viz.: the orbits are incomplete, and the ample swell of the parietes reduces the longitudinal and transverse cristæ, but especi-

ally the latter, to less than half their size in the skull of *Herpestes**. The thorax is much more capacious in *Urva* than in *Herpestes*; the spinous processes of the cervical vertebræ are smaller and more equal; and there are only 21 caudal vertebræ instead of 28, as in *Herpestes*. In both *Herpestes* and *Gulo* there are but four mammæ: in our animal there are six. The snout of our animal is much more elongated and mobile than in *Gulo*: more so palpably than in *Herpestes*. Lastly, the anal apparatus of *Urva*, differs from that of both genera, approximating it very closely to the mephitic weasels, to HORSFIELD'S *Mydans*, and to our *Ursitaxus*.

Too little is known of the anal and quasi-anal organs of many odorous and fœtid genera to enable me to speak with much confidence on this subject; but I take the present occasion to retract the assertion made in your April No. for last year relative to *Herpestes*. Both the Nipalese species of that genus (*Herpestes*,) have a congeries of small glands surrounding the caudal margin of the anus like a ring, and secreting a thick musky peculiar substance, which is slowly protruded in strings like vermicelli, through numberless minute scattered pores. And the lowland species (or *Nyula*, nobis) has also on either side the rectum, two larger and hollow glands, of similar character with the others, apparently, but distinguished by a rather thinner secretion by the hollowness of these glands, and by each being furnished with a larger and palpable pore. The peculiarity of our *Urva* is that it has only the lateral glands; that their secretion is aqueous, horribly fœtid, and projectile to a great distance by the living animal by means of the muscular rings which surround the neck of the duct; not to mention that the central cavity is much larger, and has a more distinct neck or duct, which points obliquely backwards or outwards, causing the discharge to be in that direction, I append to this paper a note by Dr. CAMPBELL, taken at my request, on the anal apparatus of our *Urva*, upon which type of our proposed new genus, I shall add no more at present save that its manners, so far as known to me, agree much more nearly with those of *Gulo* than with those of *Herpestes*.

Genus *Mustela*; subgenus *Putorius*, CUVIER. Species new. ***Subhemachalanus***, nobis. Structure, and aspect of ***Cathia vel auriventer***, nobis. Vide Journal Asiatic Society of Bengal, December 1835.

* The compressed parietes and large cristæ of *Herpestes* are interesting points of agreement with *Viverra*; as the tumid parietes and small cristæ of *Gulo* and of *Urva*, are with *Mustela*. The former or odoriferous races bear in respect to the form and size of the encephalon the same analogy with the third section of the caninæ, as the latter or fœtid races do with the second section.

Eleven and half to twelve inches long from snout to base of tail. Tail five and half inches, or six and half with the terminal hair. Uniform bright brown, darker along the dorsal line. Nose, upper tip and forehead, with two inches of the end of the tail, black brown; mere edge of upper lip and whole lower jaw, hoary. A short longitudinal white stripe, occasionally, on the front of the neck and some vague spots of the same, laterally, the signs, I suspect, of immaturity. Feet frequently darker than the body, or dusky brown. Whiskers dark. Fur close, glossy, and soft; of two sorts, or fine hair and soft wool: the latter, and the hair basally, of dusky hue; but the hair, externally, bright brown. Head, ears and limbs, more closely clad than the body; tail, more laxly, and tapering to a point. It may be worth while to add that I have recently procured some fine specimens, from the *Himálayan* districts, of the *Ermine*, in the winter dress of the species.

Putorius Erminea must, therefore, be added to the catalogue of Nipalese mammalia.

In *Nepal* the *Putorii* (of which I have now ascertained the existence of three species) are exclusively confined to the northern region. Are there any species of this subgenus in the plains of India?

P. S. With reference to our type of the genus *Ursitaxus*, the following accidental omission in the description, is material. "The penis is large, bony and ringed with two or three corkscrew processes, not unlike those of the same member in *Rhinoceros Unicornis*. The testes are large, nude, and applied to the buttocks, without any pendency of the scrotum."

It appears somewhat doubtful whether the molar teeth of *Ratellus mellivorus* be $\frac{4}{4}$ or $\frac{5}{5}$. But, even if they prove to be the former, there will still remain such striking differences of conformation and habits between that animal and our *Ursitax* as may well entitle the latter to the distinct station I have assigned to it, let the *value* of the distinction be generic or only sub-generic.

Urva Cancrivora, Hodgson, (male.) March 3rd, 1837.

The testicles, included in a neat, and very hairy scrotum, are not remarkably pendent, but are well braced up to the pubis. The penis pointing downwards (to the ground) hangs directly from the pubis as in the tiger, it is terminated by a slender depressed bone $\frac{5}{8}$ths of an inch long, and of $\frac{3}{16}$ths an inch in diameter; the urethra opening on its lower side one line from the point. The prepuce is attached to the os penis close up to the point, rendering it impossible to extend the

organ from its sheath more than ⅛ths of an inch. In copulation the point alone of the penis can be introduced, unless in this animal the organ is not bared, but used sheathed. The prepuce, however, is hairy to its attachment; which renders this unlikely.

The anal orifice is bare and very capacious. On each side of the orifice (central and lateral) rather without, than within, the sphincter, there is a round opening, large enough to admit the point of a common dissecting blowpipe, through which, on pressure of the sides of the anus, a whey-colored, fœtid fluid, the consistence of thin gruel passes in a jet. The direction of these openings is posterior (towards the tail) the fluid not passing into the rectum, but being thrown behind the animal. The blowpipe, ere it passed into the cavity communicating with these orifices, had to be directed anteriorly and laterally*. On removing the integuments from the perineum, two globular white-colored bodies, each the size of a cherry, were found in contact with the rectum, one on each side, and in the centre. The membranous attachments of these bodies to the gut being removed, there remained a connecting neck about ⅜ths of an inch long, (the duct from their centres) which opened as described, and through which the fluid was discharged. A medial section of these globular bodies separated them into two cups, the hollows of which when united were large enough to contain the largest marrowfat pea. The cavities of their bodies were lined with a very delicate white, smooth, and shining membrane, external to which, and surrounding it entirely, was a layer of white glandular substance,—the secreting organ. The whole was enveloped in a thin membranous covering. The two lateral openings described were the only ones apparent, on the anal orifice. Immediately under the integuments, and close to the sphincter ani at its perineal margin, lay the vesiculæ seminales, white, of an oval form, and ½ an inch in length. I call these bodies vesiculæ seminales as they were connected closely with the urethra at their opposite sides, from that in contact with the rectum. If they are not vesiculæ seminales, what are they? they are not prostates; but they may however correspond to the glands of Cowper in the human subject†.

A. Campbell, M. D.

* When sitting, with the animals vent towards me about a foot off, the bodies which secrete this fluid were pressed upon, when a portion of it was squirted in my face.

† I am aware that it is said, the whole of the *Carnivora*, *Ruminantia*, *Cetacea*, *Marsupiata*, and *Plantigrada*, with the exception of two of the latter, are without these vesiculæ.

VI.—*Interpretation of the most ancient of the inscriptions on the pillar called the lát of* FEROZ SHÁH, *near Delhi, and of the Allahabad, Radhia and Mattiah pillar, or lát, inscriptions which agree therewith. By* JAMES PRINSEP, *Sec. As. Soc., &c.*

I now proceed to lay before the Society the results of my application of the alphabet, developed by the simple records of Bhilsa, to the celebrated inscription on FEROZ's column, of which facsimiles have been in the Society's possession since its very foundation, without any successful attempt having been made to decipher them. This is the less to be wondered at when we find that 500 years before, on the re-erection of the pillar, perhaps for the second or third time, by the emperor FEROZ, the unknown characters were just as much a mystery to the learned as they have proved at a later period—"Round it" says the author of the *Haftaklím*, "have been engraved literal characters which the most intelligent of all religions have been unable to explain. Report says, this pillar is a monument of renown to the rájas or Hindu princes, and that FEROZ SHÁH set it up within his hunting place: but on this head there are various traditions which it would be tedious to relate."

Neither MUHAMMED AMI'N the author of the *Haftaklim*, nor FERISHTEH, in his account of FEROZ'S works alludes to the comparatively modern inscription on the same pillar recording the victories of VISALA DEVA king of *Sácambharí* (or *Sámbhar*) in the 12th century, of which Sir WILLIAM JONES first, and Mr. COLEBROOKE afterwards, published translations in the first and seventh volumes of the Researches. This was in quite a modern type of Nágarí; differing about as much from the character employed on the *Allahabad* pillar to record the victories of CHANDRA and SAMUDRA-GUPTA, as that type is now perceived to vary from the more ancient form originally engraven on both of these pillars; so that (placing CHANDRA-GUPTA, in the third or fourth century, midway between VISALA, in the Samvat year 1220, and the oldest inscription) we might have roughly deduced an antiquity of fourteen or fifteen centuries anterior to VISALA's reign for the original *lát* alphabet, from the gradual change of form in the alphabetical symbols, had we no better foundation for fixing the period of these monuments.

But in my preceding notice, I trust that this point has been set at rest, and that it has been satisfactorily proved that the several pillars of *Delhi*, *Allahabad*, *Mattiah* and *Radhia* were erected under the orders of

king DEVÁNAMPIYA PIYADASI of *Ceylon*, about three hundred years before the Christian era.

I have there also explained the nature of the document, and have now only to disclose its contents in detail, as far as my hasty scrutiny, and my very imperfect acquaintance with the languages of ancient India will permit.

The difficulties with which I have had to contend are of a very different nature from those presented by more modern inscriptions, where the sense has to be extracted from a mass of hyperbolical eulogy and extravagant exaggeration embodied still in very legible and classical Sanskrit. Here the case is opposite:—the sentiments and the phraseology are perfectly simple and straightforward—but the orthography is sadly vitiated—and the language differs essentially from every existing written idiom: it is as it were intermediate between the Sanskrit and the Pálí; and a degree of license is therefore requisite in selecting the Sanskrit equivalent of each word, upon which to base the interpretation—a license dangerous in the use unless restrained within wholesome rules; for a skilful pandit will easily find a word to answer any purpose if allowed to insert a letter or alter a vowel ad libitum. There are some substitutions authorized by analogy to the Pálí which require no explanation—such as the preposition U or *paṭi* for the Sanskrit प्रति; *kaṭe* for कृते; *dhamma* for धर्म्म; the use of ղ *kh*, and sometimes ф *chh*, for क्ष *ksh*, &c.; while others again, as ⊔ ⊦ ⅄ *hidaṭè* for हृदि or हिदायते, *hṛidhi* or *hidayate*; + ⊔ ⊥ ⊥ *kayánáni* for कल्याणानि *kalyánáni*, &c. have for their adoption the only excuse, that nothing better offers: but it is unnecessary to dwell upon these peculiarities here, as attention has been directed to all that occur in the notes appended to the translation.

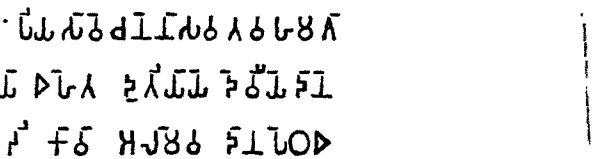
On searching the society's portfolio I found the five original manuscript plates of Captain HOARE, whence the engravings published in the Researches seem to have been copied. Their collation has been of essential service in detecting a few errors of the vowel marks that have crept into the engraving. I found also two much larger drawings of the first and last inscription of the series, apparently of the actual dimensions.—These I suppose to have been the originals presented to Sir WILLIAM JONES by Colonel POLIER, and therefore of themselves venerable for their antiquity! But they are by no means so faithful as Captain HOARE's copy, and the inscription round the column has the singular blunder of the two lowermost lines being copied in an inverted order, that is, written from right to left in the *boustrophedon* fashion. Nevertheless in one or two doubtful points they

have rendered good service by supplying a vowel, or an *anuswara* required for the plural of a verb, omitted through mistake in the smaller copy.

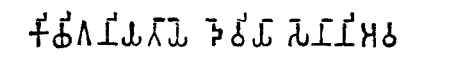
In contriving a fount of type adapted to this ancient and highly elegant form of *Nágarí*, I have made but a few insignificant alterations which I trust will not be thought unwarrantable.—The □, ○, and ⊙, being of smaller size than the other letters in the original :—I have elongated them to square with the rest. The vowels also are in the original attached to the sides of these letters as □- *bá*, ○┘ *thi*, -⊙ *thé*; I have made them □‾, ○‾, ⊙‾ to avoid an unseemly gap. The letter (is inflected on the centre with *é* and *á* thus -(, ∈; these I have for uniformity made (‾, (‾: it is necessary to notice this, lest consulters of the originals should imagine I had been taking liberties with my materials. For the compound vowel *o* also I have been forced to content myself with a prolonged stroke (the *e* and *a* united) as ⊥ *nó*, in lieu of the more elegant break given in the original to shew the two vowel marks as ⊥ *no*. Nothing material however is lost through these trifling modifications; while with them the ancient alphabet becomes easier to print, and certainly easier to read, than the more complicated letters of the (so-called) perfected (*Samskrita*) alphabet of the bráhmans.

The four inscriptions facing the four cardinal points on the pillar, appear to be enclosed in frames and to be each complete in itself. These four edicts are repeated verbatim on the three other láts, with exception of the lower half of the eastern tablet which is wanting in all, as is likewise the long inscription round the shaft below the separate tablets.

On the other hand the *Allahabad* pillar has five short insulated lines at foot* which are not to be found elsewhere. They are curious from their allusion three times to the second queen of DEVÁNAMPIYA; but from the incompleteness of the lines on the right hand the context cannot thoroughly be explained: the three letters at the end of the third line look line numerals.



* See plate IV. of Vol. III.



Devánampiyasá vechanená savata vahamagá
Vataviyá : eheta dutiyáyá deviye dáne.
Jambávadi kává alameva dána petha è (?)
Kichhi ganiyatáye deviye senáni ava.
Datiyáyá deviye titivalamatu evákiye.

We might translate the whole of the first line : देवानांप्रियस्य वचनेन सर्व्वतः ब्रह्मगाः वक्तव्याः, ' By the word of *Devánampiya*—must be called a perfect ascetic or Brahmagá.' The second line certainly records a gift द्वितीयायादेव्या ' of the second queen'—and the *alamevadána*. . a sufficiency of gifts of some particular kind. *Kichhi ganiyatá dev* may be supposed to be the name of the lady, or *kichhi* may be *kinchit*, some, little.—*Senání*, a general :—*titi* for *tritíya* third, and other insulated words can be recognized but without coherence.

To return from this digression :—The general object of DEVÁNAMPIYA'S series of edicts is according to my reading, to proclaim his renunciation of his former faith, and his adoption of the *Buddhist* persuasion, to which wholesome change he invites others from every rank in society, by a representation of its great excellency. He addresses to his disciples, or devotees, (for so I have been obliged to translate *rajaká*, as the Sanskrit रज्जुका, though I would have preferred *rájaká*, ministers, had the first *á* been long—) a number of specific rules for their guidance, with penalties of a comparatively mild nature for any omission in their performance : but the chief drift of the writing seems directed to enhance the merits of the author,—the continual recurrence of *esa me kaṭe*, ' so have I done,'—arguing rather a vaunt of his own acts, than an inculcation of virtue in others, unless by the force of example.

It is a curious fact that although the intent of the royal convert seems to have been to spread every where the knowledge of his conversion, and of the virtuous acts to which it had given rise on his part, and further to set forth the main principles of his new faith, yet the name of the author of that religion is no where distinctly or directly introduced, as BUDDHA, GOTAMA, SHÁKYA MUNI', &c. At the end of the first sentence, indeed, the expression *Sukatam kachhati*, which I have supposed to be intended for *sugatam gachhati*, may be thought to contain one of BUDDHA'S names as SUGATO, (the well-come)—but even in this the error in spelling makes the reading doubtful. In

another place I have rendered a final expression *agnim namisati*, 'shall give praise to *Agni*'—a deity we are hardly at liberty to pronounce connected with the Buddhist worship, though points of agreement and harmony may be adduced. But in any case AGNI if rendered generally as 'god' keeps him distinct from BUDDHA 'the teacher,' of whose deification no evidence is afforded by the inscription; for neither is there any allusion to images of him, nor to temples or shrines enclosing his relics. It is only by the general tenor of the dogmas inculcated, that we can pronounce it to relate to the Buddhist religion. The sacred name constantly employed—the true keystone of SHÁKYA'S reform—is *Dhamma* (or *dharma*), 'virtue;' upon the exceeding excellencies, and the incontestable supremacy, of which divine attribute the whole of his system seems to have originally rested, and by which it may have won its way to the hearts of a people whose inclinations were already imbued with admiration of this quality in their own ancient system, though it had since been mixed up with an unseemly mass of inconsistencies and gross idolatries: and the pious and reflecting must have been glad to reject them, when an opportunity was afforded of saving their consciences from the dreadful alternative of being thought to throw off all religion, if they discarded the one in which they were born and bred. Buddhism was at that time only sectarianism; a dissent from a vast proportion of the existing sophistry and metaphysics of the Bráhmanical schools, without an absolute relinquishment of belief in their gods, or of conformity in their usages, and with adherence still to the milder qualities of the religion, to all in short that it contained of *dharma*, —virtue, justice, law. The very term *Devánampiya*, 'beloved of the gods,' shews the retention of the Hindu pantheon generally; and this might be easily confirmed by reference to Mr. CSOMA'S note on the birth and life of SHÁKYA.

Those who have studied the mystics of Buddhism from the lucid dissertation of Mr. HODGSON in the January and February Nos. of last year's Journal, will know that DHARMA is the second member of the *Triámnáya*, or triad,—*(Buddha, Dharma, Sangha,—)* according to the theistical school; while what Mr. HODGSON calls the atheistical school exalts *Dharma* to the first place. With them "*Dharma* is *Diva natura*, matter as the sole entity, invested with intrinsic activity and intelligence, the efficient and material cause of all:—*Buddha* is derivative from *Dharma*, is the active and intelligent force of nature first put off from it and then operating upon it:—*Sangha* is the result of that operation; is embryotic creation, the type and sum of all

specific forms, which are spontaneously evolved from the union of *Buddha* with *Dharma**." Happily in our inscription there is no necessity to resort to these subtleties of the schools which have rendered a plain matter perplexed. The word is here evidently used in its simple sense of "the law, virtue, or religion"—and though its gifts and excellencies are vaunted, there is no worship offered to it, no godhead claimed for it.

The word *dhamma* is in the document before us generally coupled with another word, *vaḍhi*, in its several cases, *dhamma-vaḍhi*, *dhamma-vaḍhiyá*, &c. according to the Sanskrit grammatical rules of combination or *samása*.

The most obvious interpretation of the word *vaḍhi* is found in the Sanskrit वृद्धि *vriddhi*, increase, whence are derived the vernacular words *baṛhná*, to increase; *baṛhtá*, increasing; *baṛhaí*, increase, &c., differing imperceptibly in pronunciation from the *vaḍhi* and *vaḍhitá* of the inscription. The constant recurrence of the same expression would lead to the conclusion that the religion of BUDDHA was then generally known by this compound title, as 'the increase of virtue,' 'the expansion of the law,' in allusion to the rapid proselytism which it sought and obtained.

Against this interpretation if it be urged that the dental *dh* 𑀥 is in other cases used for the Sanskrit *dh* ध; as in the word *dharmma* itself; in *vadha*, murder; *bandha*, bound, &c. Such objection may be met by instancing other undoubted cases where the cerebral *ḍh* is used for the Sanskrit ढ *ddh* as in 𑀳𑀸𑀓𑁄𑀲𑀬𑀸𑀦𑀺 *aḍhakosayáni* (for *arddha*) 'half kos;' and in like manner the dental *rth* is generally expressed by the cerebral *ṭh*, as *aṭha*, *aṭháya* for अर्थ, अर्थाय.

The only other word by which *vaḍhi* can be rendered is the Sanskrit वृत्ति *vritti*, 'occupation, turning.' Now we have examples of the dental *t* being represented by the cerebral *d* in the inscription, especially when double or combined with *p*, as 𑀲𑀤𑁆𑀡 *saḍḍa* for *sapta*, (or *satta*, Páli) seven; and in one compartment (the commencement of the under inscription round the shaft), the same letter, 𑀡 *ḍḍ* is used indifferently for 𑀥, *ḍh*, in the very word, *dhamma vaḍḍiyá*, which we are discussing. It is hardly possible to imagine that two expressions so strikingly similar in orthography as *dhammavaḍhi* and *dhammavatti* or *vaḍḍi*, yet of such opposite meaning should be applied to the same thing. One must be wrong; and I should have had no question which to prefer, were it not for a curious expression I remembered to have met with in the Tibetan translation of the Buddhist volumes.

* Journ. As. Soc. Vol. V. page 37.

Of the twelve principal acts in SHÁKYA's life described in the *Gya-cherrolpa* (*S. Lalitavistára*), the tenth is translated by Mr. CSOMA KOROSI, "He *turns the wheel of the law*, or publishes his doctrine;" now it was possible that the Sanskrit of this expression might be found धर्म्मं देशिंविवर्त्तयते or in the Páli, *dhammavitti vavetḥayati*, *vutti* signifying explication or *doctrine*, as well as 'wheel.'

Finding a copy of the *Lalita Vistára* in Sanskrit amongst Mr. HODGSON's valuable collection of Buddhist works transferred from the College of Fort William to the Asiatic Society's library, I requested my pandit KAMALA'KA'NTA to look into it for this expression 'wheel of the law' adopted by the Tibetan translators; and he was not long in extracting an abundance of examples of its use: thus in the 299th leaf, in the 25th *adhyáya*, TATHÁGATA (*Buddha*) is made to say:—

बाराणसीं गमिष्यामि गत्वा वै काशिकांपुरीं।
धर्मं चक्रं प्रवर्त्तिष्ये लोकेषु प्रतिवर्त्तितं॥

'I will go to *Benares*:—having arrived at the city of *Káshi*, I will turn the wheel of the law, which is revolving amongst mankind, (i. e. I will run my religious course.')

The word *dharmachakra* is here distinct enough, and not to be confounded with our *dhammavaḍhi*. The following example from the 213th leaf, I therefore add less to strengthen the evidence than as a curious employment of many of the expressions met with in other parts of our inscription, particularly in the eastern tablet.

शिरसाहिःप्रणिपत्य तथागतमधेसक्तस्य धर्मचक्र प्रवर्त्तनाय प्रवर्त्तयतु भगवान् धर्मचक्रं। प्रवर्त्तयतु सुगतः धर्मचक्रं। बहु जन हिताय बहुजन सुखाय लोकानु कम्पार्थे महते जनकार्थस्यार्थाय हिताय सुखाय देवानांच मनुष्याणां यस्य भगवन् धर्मचक्रं। प्रवर्ष महा धर्मवर्षं। उच्छापय महा धर्मध्वजं। प्रपूरय महाधर्म शंखे। प्रताडय महाधर्मदुन्दुभिं॥

"Having bowed the head in reverence:—Do thou, oh BHAGAVA'N, be pleased to set about turning the wheel of the law of him that hath firmly embraced TATHA'GATA. Turn thou the wheel of the law oh SUGATA! For the benefit of much people, for the delight of much people, for compassion to the world, for the urgent reason of the necessities of man,—for the benefit, for the delight alike of angels and men,—perform thou, oh BHAGAVA'N, the sacrifice of the law:—pour down the plentiful shower of the law:—lift up on high the great banner of the law:—blow forth the great conch of the law:—strike loud the great drum of the law!"

The multitude of metaphors employed in this example and throughout the volume, in connection with *dharma*, prepares us for the *dhamma kámatá*, *dhamma pekhá*, *dhamma vaḍhi* of our inscription. Still a more

direct illustration by the actual employment of the term *dharma vriddhi* was wanting; and, although on further search the precise expression was not found; the pandit met with many instances of the word *vriddhi* occurring in connection with *bodhi*, which as applied to the Buddhist faith was nearly synonymous with *dharma: Bodhi vriddhi*, the growth of knowledge, or metaphorically the growth of the *bodhi* or sacred fig tree—the tree of knowledge, being as applicable to Buddhism, as *dharma vriddhi*, the growth of grace. Thus in the 181st leaf:

भिक्षवस्तस्मिन्समये ऽष्टौ बोधिवृद्धि देवताः ॥ तत्यथ ॥ श्रीवृद्धिः दया श्रेयसीचित् । इडावला सत्यवादिनी ॥ समगुनोचयाः ताःबोधिसत्वं शुश्रूषातः महीराकारै बोधि सत्त्व श्रिया वर्द्धयन्तिस्म ॥

'The *bhikshus* (priests) at that time (said there were) eight goddesses of *bodhi vriddhi*: that is to say:—*Srí vriddhi, dayá, sreyasi, chit, iḍavalá, satyavádini; samagúni, chayá**:—these (eight divine personifications) from doing service to the great saint, by the practice of asceticism, as well as by the grace of the great saint, (the said priests) have magnified.'

This passage is corrupt and consequently obscure, but it teaches plainly that *dharmavriddhi* of our inscription may always be understood, like *bodhivridhi*, in the general acceptation of 'the Buddhist religion.'

Proselytism, turning the wheel, or publishing the doctrines, whichever is preferred, was evidently a main object of the Buddhist system, and it is pointed at continually in the pillar inscription. Not content with injunctions to spread the tenets among the rich, the poor, the householder, and the ascetic;—bráhmans, the arch-opponents of the faith, are also named, under the disguise of the corrupt spelling *bábhana*; even the court and the zenánah (if the term is allowable for a period anterior to the seclusion of the fair sex)—are specifically recommended to the discreet and respectful endeavours of the missionary.

I have said that the founder of the faith is not named. Neither is the ordinary title of the priesthood, *bhikhu* or *bhichhu* to be found, though the word is so frequently met with among the Bhilsa *dánams*. The words *mahámatá*, (written sometimes *mátá*) and *dhamma mahámatá* seem used for priests 'the wise men, the very learned in religion.'—

* Grace, increase, mercy, happiness, genius, praise-giving, truth-speaking, equality.—*Dayá* is written *tayá*: *iḍavalá, ajávalá*, and *samagunú, samagini*: in fact the whole volume is so full of errors of transcription that it was with difficulty KAMALA'KA'NTA could manage to restore the correct reading.

The same epithet is found in conjunction with *bhikhú* in the interesting passage quoted by Mr. TURNOUR in the preceding article on the *Pitakattayan*, (see page 506.)

But it is possible that this expression has been misunderstood by the pandit: *mahámátá* 𑀫𑀳𑀸𑀫𑀸𑀢𑀸 even if by shortening the *a* it be read *mahámatá*, the greatly wise, can only metaphorically be said to become *vyáptá* or 'pervading' all orders of society, in order to conversion: while Mr. HODGSON's epitome, above alluded to, gives us another mode of interpretation perhaps more consonant with the spirit of the system. *Mahámátrá* (in Páli *mahámátá*) is another name for *Dharma*, as *Prajná Paramitá* the *great mother* of *Buddha*—the universal mother, omniscience, illusion, *máyá*, &c.—and as such may be more correctly supposed to *pervade* than *mahámatá* the priests, which moreover is always written in Páli, *mahámati*.

It will be remarked that assemblies are mentioned (*nikáyáni*), and preachings (*dhammasávánáni*), and ordinances of all sorts, but there is no allusion to the *vihára* by name, nor to the *chaitya*, or temple: no hint of images of BUDDHA's person, nor of relics preserved in costly monuments. The spreading fig tree and the great *dhátris*, perhaps in memory of those under which his doctrines were delivered, are the only objects to be held sacred, or to have rites performed at them; and in those rites, the meat-offering—the sacrifice of blood, is interdicted as the highest sin.

The edict prohibiting the killing of particular animals is perhaps one of the most curious of the whole.—The particularity with which it commences on the birds is ill supported by what follows regarding animals, which are dismissed with a *savachatupadè* 'all quadrupeds'—as if the sculptor or scribe had found the engraving of such a list too long a job to complete.—The two first birds, *suke*, *súrike*, the green parrot and *maina*, are the principal pet birds of the Hindus, still universally domesticated, and not rivalled by the nightingale of Persian introduction. Many of the names in the list are now unknown, and are perhaps irrecoverable, being the vernacular rather than the classical appellations. I have pointed out such endeavours as have been made by the pandits to identify them, in my notes. Others of the names in the enumeration of birds not to be eaten, will remind the reader of the injunctions of Moses to the Jews on the same subject. The list in the 11th chapter of Leviticus comprises 'the eagle, the ossifrage, the ospray, the *vulture* and kite: every *raven* after his kind, the *owl*, night hawk, cuckoo and *hawk*; the little *owl*, cormorant and great owl: the *swan*, *pelican*, and gier-eagle; the *stork*, heron, lapwing and *bat*,'—those marked in italics being found in our list. The verse imme-

diately following the catalogue of birds, "All *fowls* that creep upon *all four* shall be an abomination unto you," presents a curious coincidence with the expression of our tablet '*savechatapade ye paṭi bhogan no etè*,' which comes after *gámakapote*, the tame dove.

But the edict by no means seems to interdict the use of animal food—probably this would have been too great an innovation. It restricts the prohibition to particular days of fast and abstinence, on the chief of which, fowls that have been killed are not even to be offered for sale—and on these days, beasts of burthen are to be exempted from labour: 'the ox even shall not be tied up in his stall.'

The sheep, goat, and *pig* seem to have been the staple of animal food at the period—they are expressly mentioned as kept for fattening, and are only not to be slaughtered while with young or giving milk: but merit is ascribed to the abstaining from animal food altogether.

Ratna Paula tells me no similar rules are to be found in the Páli works of *Ceylon*, nor are the particular days set apart for fasting or *upavásun* in the inscription, exactly in accordance with modern Buddhistic practice which observes only the *aṭṭhami* and *panaradassami*, or 8th and 15th of each half lunation, (that is, nearly every 7th day.) All the days inserted are however of great weight in the Hindu calendar of festivals, and the sectarians may not yet have relinquished them. Thus the two lunar days mentioned in the south tablet, *tishya* (or *pushya)* and *punarvasu*, though now disregarded, are known from the *Lalitu Vistára* to have been strictly attended to by the early priests. In the 14th leaf we have the following example.

अथ खलु भिक्षवो बोधिसत्व सर्व नगरजनं प्रसुप्तं विदित्वार्द्धरात्रि समयंचोपस्थितं ज्ञात्वा ष्यु नक्षत्राधिपति युक्तं ज्ञात्वा सांप्रतंनिष्क्रमण कालमिति ज्ञात्वा खन्दक मामंत्रयंतिस्म।

'The priests perceiving the people of the cities of Bodhisatwa to be sleeping, and knowing too that the middle of the night had arrived, and knowing that *the moon had entered into the mansion of Pushya*; knowing that this was the time of night to depart (for some religious observance), called their disciples.'

In one respect the mention of these days is of high interest, as proving that the luni-solar system of the bráhmans was the same as we see it now, three centuries before our era, and not the modern invention Bentley and some others have pretended. The astronomy of the *Puránas* was (as Mr. Wilkinson has shewn) as much a bone of contention between the two sects, as were their other branches of metaphysics.

None of the fierce conflicts between the followers of the two religions had yet probably taken place. Occupying the throne and the court it had

nothing yet to fear. Nevertheless (if I have read the passage aright) opposition was contemplated as conversion should proceed, and the weapons prescribed to meet it are "the foolishness of preaching," and a stedfast adherence to ordinances. Meantime the example of royal benevolence was exercised in a way to conciliate the *Nánápásandas*, the Gentiles of every persuasion, by the planting of trees along the roadsides, by the digging of wells, by the establishment of bazars and serais, at convenient distances. Where are they all? On what road are we now to search for these venerable relics, these banyan trees and mangoes, which, with the aid of Professor CANDOLLE's theory*, would enable us to confirm the assumed date of our monuments? The lát of FEROZ is the only one which alludes to this circumstance, and we know not whence that was taken to be set up in its present situation by the emperor FEROZ in the 14th century—whether it had stood there from the first? or whether it was re-erected when it received the inscription recording the victories of VISALA DEVA in the *Samvat* year 1220 or A. D. 1163?—This cannot be determined without a careful re-examination of the ruinous building surrounding the pillar, which I hope some of my antiquarian friends will undertake. The chambers described by Captain HOARE as a menagerie and aviary may have been so adapted from their original purpose as cells for the monastic priesthood—a point which the style of their architecture may settle. The neighbourhood should also be examined for traces of a *vihára*, a holy tree, a road, and boulees or large *pakka* wells:—the texture of the stone also should be noticed, that the quarry whence it was brought may be discovered, for now that we know so much of its history we feel a vivid curiosity to pry into the further secrets of this interesting *silastambha*, even to the difficulties and probably cost of its transport, which, judging from the inability of the present Government to afford the expense even of setting the *Allahabad* pillar upright on its pedestal, must have fallen heavily on the coffers of the *Ceylon* monarch!

But I must now close these desultory remarks, in the hope of hereafter rendering them more worthy of the object by future study and research; and proceed to lay before the Society, first a correct version of the inscription in its own character, and then in Roman letters which I have preferred to Nágarí, because the *Páli* language has been already made familiar to that type by MM. BOURNOUF and LASSEN, as well as by Mr. TURNOUR's great edition of the *Mahávansa*, now just issued from the press.

* See translation of his Essay on the Longevity of Plants, J. A. S. vol. III. p. 196.

I.—*Inscription on the North compartment.*

[The *Allahabad* version is cut off after the first letters of the 19th line. J. A. S. vol. III. p. 118. The *Mathia* and *Radhia* lats contain it entire, adding only *iti* at the conclusion, and after *Sacke Sochaye* in the 12th line.]

II.—*Inscription on the West compartment.*

1 𑀦𑀢𑁆𑀢𑀸 𑀫𑀳𑀸𑀭𑀸𑀚𑀲 𑀭𑁄.𑀲𑀺𑀭 𑀳𑀤𑁆𑀥𑀸𑀬𑀸𑀭𑁄𑀳

2 𑀲𑀫𑁆𑀫𑀸𑀯𑀸𑀓𑁆𑀬𑀁 ः𑀫𑁆𑀢𑀲𑁆𑀬𑀸𑀦𑀼𑀚𑀸 𑀬𑁂𑀷

3 □𑀳𑀸𑀫𑀸𑀦𑀼𑀭𑀸𑀕𑀲𑀸𑀳 𑀇𑀢𑁆𑀬𑀲𑁆𑀬𑀸 𑀯𑀸𑀫𑁆𑀫𑁆𑀭𑀸𑀚

4 𑀦𑁆𑀭𑁄 𑀲𑀸𑀯𑀸𑀬𑀢𑁄 𑀦𑀸𑀬𑀇 𑀲𑀸𑀫𑁆𑀭𑀸𑀚

5 𑀦𑀸𑀭𑀸𑀬𑀡𑁄 𑀇𑀢𑀇𑀢𑀸 𑀫𑀸𑀭𑀸𑀬𑀸𑀁

6 𑀲𑀢𑁆𑀬𑀫𑁆𑀭𑀸𑀷 𑀬𑁂𑀫𑁆𑀇.𑀫𑁆𑀢𑁆𑀫𑁆𑀢𑁆𑀫𑁆𑀭𑁄

7 𑀬𑁂𑀫𑁆𑀭𑁄 𑀦𑁆𑀭𑀸𑀫𑀸 𑀬𑁂𑀫𑁆𑀇.𑀇𑀫𑁆𑀇𑀇 𑀬𑁂𑀫𑁆𑀭𑁄

8 𑀲𑀫𑁆𑀫𑀸𑀦𑀼 𑀬𑁂𑀷𑀸𑀫𑁆𑀭𑁄 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀫𑀸𑀭𑀸𑀬𑀡𑁄

9 𑀦𑁆𑀭𑀸𑀫𑀸 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀬𑁂 𑀬𑁂𑀫𑁆𑀭𑀸𑀚𑀸𑀫𑁆𑀭𑁄 𑀇𑀢𑁆𑀬𑀲𑁆𑀬𑀸

10 𑀫𑁆𑀭𑁄 𑀲𑀸𑀯𑀸𑀬𑀢𑁄 𑀇𑀫𑁆𑀭𑁄 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀯𑀸𑀫𑁆𑀫𑁆𑀭𑀸𑀚

11 𑀲𑀸𑀫𑁆-𑀫𑁆𑀭𑁄 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀫𑀸𑀭𑀸𑀬𑀡𑁄 𑀫𑁆𑀢𑁆𑀫𑁆𑀢𑁆𑀫𑁆𑀭𑁄

12 𑀦𑁆𑀭𑁄.𑀲𑀸𑀯𑀸𑀬𑀢𑁄 𑀇𑀢𑁆𑀬𑀸𑀦𑀼𑀭𑀸𑀕𑀲𑀸𑀳

13 𑀲𑀸𑀫𑁆𑀫𑁆𑀭𑀸𑀚 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀫𑀸𑀭𑀸𑀬𑀡𑁄

14 𑀲𑀫𑁆𑀫𑀸𑀯𑀸𑀓𑁆𑀬𑀁 ः𑀫𑁆𑀢𑀲𑁆𑀬𑀸𑀦𑀼𑀚𑀸

15 𑀬𑁂𑀷𑀸𑀫𑁆𑀭𑁄 𑀦𑁆𑀭𑀸𑀫𑀸 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀫𑀸𑀭𑀸𑀬𑀡𑁄 ः𑀳𑀸

16 □.𑀫𑁆𑀢𑁆𑀫𑁆𑀢𑁆𑀫𑁆𑀭𑁄.𑀇𑀢𑁆𑀬𑀸𑀦𑀼𑀭𑀸𑀕𑀲𑀸𑀳

17 𑀫𑁆𑀢𑁆𑀫𑁆𑀢𑁆𑀫𑁆𑀭𑁄 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀫𑀸𑀭𑀸𑀬𑀡𑁄

18 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀬𑁂𑀫𑁆𑀭𑀸𑀚 𑀲𑀸𑀫𑁆𑀭𑀸𑀚 𑀬𑁂𑀫𑁆𑀭𑀸𑀚.

19 ः𑀲𑀸𑀫𑁆𑀭𑀸𑀚 𑀦𑁆𑀭𑀸𑀫𑀸 𑀬𑁂𑀫𑁆𑀭𑀸𑀚.𑀳𑀸𑀫𑁆𑀭𑁄 𑀬𑁂𑀫𑁆𑀭𑀸𑀚.𑀇

20 𑀬𑁂𑀫𑁆𑀭𑁄 𑀫𑀸𑀭𑀸𑀬𑀡𑁄 𑀫𑁆𑀢𑁆𑀫𑁆𑀢𑁆𑀫𑁆𑀭𑁄 𑀬𑁂𑀫𑁆𑀭𑁄

[The second part of the *Allahabad* inscription begins to be legible at the 12th letter of the 14th line. The whole is to be found on the *Radhia* pillar, (vol. IV. Pl. VII.) The termination at *Mathia* differs (vol. III. Pl. XXIX.) in having inserted after the 3rd letter of the 20th line the words 𑀳𑀸𑀫𑁆𑀭𑁄 the rest as here given.]

III.—*Inscription on the South compartment.*

[The word *Ajakánáni* at the end of the 7th line seems accidently to have been omitted in the Feroz lát. It is supplied from the *Radhia* and *Mathia* pillars. The *Allahabad* version is erased from the 3rd letter of the 6th line. The other láts have ꠟ after ꠞ, twice in the 10th line.]

IV.—*Inscription on the East compartment.*

[The *Mathia* and *Radhia* inscriptions terminate with the tenth line. The remainder of this inscription and the following running round the Column are peculiar to the *Delhi* monument.]

Translation of the Inscription of the North compartment.

Thus spake king DEVÁNAMPIYA PIYADASI :—In the twenty-seventh year of my anointment, I have caused this religious edict to be published in writing. I acknowledge and confess the faults that have been cherished in my heart. From the love of virtue, by the side of which all other things are as sins—from the strict scrutiny of sin, —and from a fervent desire to be told of sin :—by the fear of sin and by very enormity of sin :—by these may my eyes be strengthened and confirmed (in rectitude).

Line,	Transcript of the Inscription on the North compartment.
1	*Devánampiya piyadasi Lája evam áhá. Saḍḍavísativasa*
2	*abhisitenamé, iyam Dhammalipi likhápitá* 1.
3	*Hidatapálitè dusampáṭipádaye* 2. *Aṇṇata agáyá dhammakámatáyá*
4	*agáya palikháyá, agáya susúsáyá, agèna bhayená,*
5	*agena usihená, esa chakhomama anusathiyá* 3.

1. The opening sentence has been fully explained and commented on in the preceding Journal, page 469.

2. The whole of the northern tablet, although composed of words individually easy of translation, presents more difficulties in a way of a satisfactory interpretation than any of the others. This first sentence particularly was unintelligible to RATNA PAŬLA, who for *Dusampaṭi* would have substituted *Dasabala*, 'the ten (elephant) powered' a name of *Buddha*. The pandit's reading seems more to the purpose, कुदिपाछितं (or nearer still to the text) कुदयतः पाछितं दोषं प्रतिवादय, 'I declare or confess the sins cherished in my heart;' वादये being the *proper* or *regular* form as opposed to the *common* form of the verb according to the rules obtaining in the Páli, as in the Sanskrit, language.

3. The sense of this passage, although at first sight obvious enough, recedes as the construction is grammatically examined. I originally supposed that *Annata* was meant for *Ananta*, the anuswara being placed by accident on the left, and had adopted the nearest literal approach to the text in Sanskrit for the translation :—अनन्ताया धर्मकामताया अथाय परीक्षया अथाय शुश्रूषया अथाय भयेन अथेन उत्त्रासेन एतेन चक्षुर्मम अनुशिष्यात्, viz. : 'through the examination, &c. of the sinfulness of the numberless sins connected with the worldly passions;' but in this it was necessary to omit two long vowels (in *parikkháyá* and *sususáyá* to place them in the third case. By making them of the fifth case, (in Sanskrit the *nyabalope panchami*) and by reading *Anyata*, every letter can be exactly preserved with the sense given in the present translation; thus: अन्यतोधाया धर्मकामताया अथाय परीक्षाया अथाय शुश्रूषाया; the rest as before. In this the most doubtful words are *usritena* and *chaksho*; the latter RATNA PAULA would break into *cha-kho*, 'and certainly' (*kho* for *khalu*); the former may be replaced by उत्त्रासिया, 'by perseverance,' but this is hardly an improvement. It is also a question whether *Dhamma káma* is to be applied in a good sense as 'intense desire of virtue,' or in a bad, as 'dominion of the sensual passions.'

The sight of religion and the love of religion of their own accord increase and will ever increase: and my people whether of the laity, *(grihist)* or of the priesthood *(ascetics)*—all mortal beings, are knit together thereby, and prescribe to themselves the same path: and above all having obtained the mastery over their passions, they become supremely wise. For this is indeed true wisdom: it is upheld and bound by (it consists in) religion—by religion which cherishes, religion which teaches pious acts, religion that bestows (the only true) pleasure.

Thus spake king DEVÁNAMPIYA PIYADASI:—In religion is the chief excellence:—but religion consists in good works:—in the

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6 *Dhamma pekhá, dhamma kámatá cha suve suve vaḍhitá vaḍhisati cha vi* 4
7 *pulisápi cha me ukasá cha gevayá cha maritimácha anuvidhiyanti* 5,
8 *sampaṭipádayanti cha: alanchapalan samádipayitave hemeva anta*
9 *mahámátápi* 6 *esahi vidhi yá, iyam dhammèna pálinà dhammèna vidhéne*
10 *dhammèna sukhiyanà dhammena gòiti* 7. *Devánampiya piyadasi Lája*
11 *hevam áhá. Dhamme sádhu, kiyamcha dhammèti; apássinavai* 8 *bahukiyéne* 9;

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4. This sentence is equally simple in appearance, though ambiguous in meaning from the same cause; धर्मप्रेक्षा धर्मकामता च सदा सदा वर्द्धिता वर्द्धयतेचवै; *kámatá* is however here applied in the good sense with *dharma*.

5. Two readings here offer, both nearly similar in meaning—पुरुषा चपिचमे राजसाच गीर्वाणाच मध्यमाच—'my people, yea, the demons, the gods, and those of a middle state:'—or लोकसाच गिरयच मर्त्ताच, (my people) 'both family folk, ascetics, and mortals (in general),' अनुविद्धन्ते संप्रतिपद्यन्ति च, are united together (like the threads in a cloth) and follow together in one path, (or consent together:) for *pádayanti* read *padayanti*.

6. Either समाधिप्राप्तय, 'having obtained devout meditation,' or (which is nearer the text समाहि प्राप्, from सम, 'abstinence from passion,' the participle termination आ *taṅ* from the prefixing of *pra*, becomes *yáp*, or is changed to य: it seems preserved in the Páli *payitave*, quasi *payitwá*. हेमेवायन्ति महामता चपि, *mahámatá*, supremely wise, may be made nearer to the text, where the third *á* is long, by reading महामात्रा चपि, *mahámátrá*, being the holiest act of brâhmanical reverence, accompanied by the closing of every corporeal orifice.

7. This passage is somewhat obscure—but it is tolerably made out by attention to the cases of the pronouns and the four times repeated *Dharma* in the third case: thus एषाहिविधा दृयं धर्मेणपालिना धर्मेण विधिना धर्मेण सुखायना धर्मेण यथिता from the root यथ, to knit or string together. The text gives the literal translation according to this reading: but the aspirated *d* and the separation of *yá* would favor the reading एषहिविधि यो अयं, &c. 'this is the true path, or rule,' &c. In either case there are errors in the genders of the pronouns.

non-omission of many acts: mercy and charity, purity and chastity;—(these are) to me the anointment of consecration. Towards the poor and the afflicted, towards bipeds and quadrupeds, towards the fowls of the air and things that move in the waters, manifold have been the benevolent acts performed by me. Out of consideration for things inanimate even many other excellent things have been done by me. To this purpose is the present edict promulgated; let all pay attention to it: (or take cognizance thereof,) and let it endure for ages to come: and he who acts in conformity thereto, the same shall attain eternal happiness, (or shall be united with SUGATO.)

12 *dayádane, sacha sochaye; chakhodáne pime* 10; *bahu vidha dine, Dupada*
13 *chatupadesu, pakhi-válichalesu, vividhame anugahe kate* 11; *apána*
14 *dákhindye annánipicha me bahúni kayánáni katáni* 12: *étáye me*
15 *athdya iyam dhammalipi likhapitá. Heva anupatipajantu chiran*
16 *thitikácha hotutíti* 13, *Ye cha hevam sampatapajisati se sukatam kachhatíti* 14.

8. *Apasinavai* (in other láts with a double *s*), is the Sanskrit अपाक्षनवै, 'not certainly omitting,'—alluding either to the words क्रियां, or the non-omission of deeds just mentioned, or to what follows.

9. By *kiyáne*, both my Páli and my bráhmanical advisers insist upon understanding *kalyáne* कल्याणे, happiness; *bahu kalyáne* in the seventh case *(nimitat saptami)* 'for much happiness.'—But I prefer the more simple क्रियाणि acts—in the neuter like the preceding *kiyam*: the Sanskrit *kriyá* is however feminine.

10. दखादाने सत्यंचेच चखुदानेपिमे; शुचये may also be read, of the same signification—purity from passion or vice. *Chakhurdán* is explained in WILSON'S Dictionary as 'the ceremony of anointing the eyes of the image at the time of consecration'—but it is also allegorically used for any instruction, or opening of the eyes derived from a spiritual teacher.

11. A very easy sentence; बहुविधेदाने द्विपदचतुष्पदेषु पक्षिवारिचरेषु विविधमे अनुग्रह कते—the construction is as that of the Latin ablative absolute, 'many kindnesses being done of me, towards the poor,' &c.

12. This is also equally clear:—अप्राण दाक्षिण्याय अन्यानि अपिचम बहूनि कल्याणानि कतानि—*aprána* may here allude to vegetable life, or to that which doth not draw breath; benevolence to inanimate things.—For अन्यानि also अन्नानि grain, food, may be intended. A better sense for *apána* may be obtained by reading आपायन दाक्षिण्या pleasing and conciliatory demeanour.

13. इतमे अर्थाय 'on this account, or with this intention,' इदं अनुप्रति पद्यन्तां—the Sanskrit verb is in the *átmane-pada or regular form*, the Páli in the *parasmai-pada* or ordinary form—'let all pay attention to:' चिरंस्थितिकाम भवतु इति—'let it (the ordinance) be enduring for ages.'

14. If *ye* and *se* are here preferred, the verbs must be plural, otherwise *ya* and *sa* are required. एव एवं संप्रतिपद्यन्तीति मे सुकत कच्छतीति. In this, the only method of reading the text, there is a corrupt substitution of *k* for *g* twice: but other instances of the same substitution occur elsewhere.

Thus spake king DEVÁNAMPIYA PIYADASI :—Whatever appeareth to me to be virtuous and good, that is so held to be good and virtuous by me, and not the less if it have evil tendency, is it accounted for evil by me or is it named among the *asinave* (the nine offences ?). Eyes are given (to man) to distinguish between the two qualities (between right and wrong) : according to the capacity of the eyes so may they behold. The following are accounted among the nine minor transgressions :—mischief, hard-heartedness, anger, pride, envy. These evil deeds of nine kinds shall on no account be mentioned. They should be regarded as opposite (or prohibited). Let this (ordinance) be impressed on my heart, let it be cherished with all my soul.

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17 *Devánam piya piya dasi Lája hevam áhá. Kayánammeva dekhati iyam me*
18 *kayánekaṭeti. Nomina pápam dekhati, iyam me pápekaṭeti : iyamvá asinave*
19 *námáti* 16. *Dupatavekha chukho esa hevam chukho esa dekhiye* 17. *Imáni*
20 *asinava gaminindma (ti)* 18 ; *atha chandiye niṭhúriye kódhá máne isyá :*
21 *karananavahakam* 19 *mápalibhasayisanti : esa báḍha dekhiye* 20 *iyam me*
22 *hidatikáye iyam mana me páliti káye (ti)* 21.

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15. By the pandit कल्याणमेव देक्खति इयं मे कल्याणे छतेति literally '(whatever) may direct or tend to the happiness of me—this for my happiness is done.' Again नेमिन (by iteration for) नमेपापं देक्खति इयं मेपापेछतेति (whatever) may exhibit the sinlessness of me—this for my sinlessness is done, *(mé-apápe.)* In the translation I have suppo sed *iyam* to be *ayam*, in the neuter, and have taken *dekhati*, as allied to the vernacular *dekhna*, which in Sanskrit changes in this tense to *drishyate* or दृश्यत is seen.

16. इयं वा असिनवेनाम्मोति—or this is called *Asinava*—a word of unknown meaning. The pandits would read *adinava*, transgressions—but the word is repeated more than once with the same spelling, and must therefore be retained.

17. An obscure passage, *chakho* (written *chukho*) being neuter does not agree with *esa* m.—overruling this as an error, we may make, इंप्रतिवोचितुं चक्षुरेतसे इयं चक्षुरेतत्पश्यतु—*dekhiye*, is precisely the modern Hindí subjunctive, 'may or shall it see.'—See note 15.

18. The *ti* does not exist on the Feroz lát though it is retained on the others. —*Asinava gámini* is the former unknown term—which seems here to mean the *nine asa* or petty offences. मामोनिनाम (are) 'included amongst, or called :'—

19. चय चण्डल, नैछुर्य. क्रोध, मान, ईर्षा, कारल मवकं—Some of these agree with the nine kinds of subordinate crimes enumerated in Sanskrit works :—which are as follows :—मोह माया राग मद काम दंभ देव लोभ मत्त ignorance, deceit, envy, inebriety, lust, hypocrisy, hate, covetousness, and avarice. These several vices मापरिभाषयिष्यंति shall not even be named.

20. एषवाधा इयः 'count these forbidden' (making *esa* agree with *báḍha* as in Latin) and for *báḍha* reading *bádha*, opposition—hindrance.

21. इयंमे हृदि कार्य्या, इयं मनसिमे पालिताकार्य्यंति, 'This is established in my heart—this is cherished in my mind.'

Translation of the West inscription.

Thus spake king PIYADASI, beloved of the gods. In the twenty-seventh year of my anointment, I have caused to be promulgated the following religious edict. My devotees, in very many hundred thousand souls, having (now) attained unto knowledge; I have ordained (the following) fines and punishments for their transgressions. Wherever devotees shall abide around, (or circumambulate) the holy fig-tree for the performance of pious duties, the benefit and pleasure of the country and its inhabitants shall be (in making) offerings: and according to their generosity or otherwise

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Transcript of the Inscription on the West compartment.

Line,

1 *Devánampiya piyadasi Lája hevam áhá. Saḍḍavísati vasa*
2 *abhisitenamè iyam dhammalipi likhápitá. Lajakáme* 1
3 *bahusu páṇa sata sahasesu janasi áyatá* 2, *tesaṃ ye abhihárevа*
4 *daṇḍeva atapatiya me kaṭe* 3. *Kinti rajaká asvatha abhitá* 4
5 *kaṃmáni pavataye vu (ti)* 5 : *janasajanapadasá hitasukhaṃ upadahevu (ti)* 6

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1. रञ्जका मे *ranjakáme* my devotees or disciples; from रञ्ज to have the affections engaged by any object:—Had the á been long the preferable reading would have been *rájaká*, assemblies of princes or rulers, quasi courtiers or rulers.

2. बहुषु प्राणि शतसहस्रेषु जनेषु आयता is the pandits reading, making *rajaká* in the vocative—'oh devotees who are come in many souls, in hundreds of thousands of people:'—but in this reading *janasi* which is found alike in all the texts must be placed in the 7th case plural, *janèsu*. ज्ञानेस्मिन् आयाता *jnánasm in áyatvá* (Páli *janasi áyatá*) 'having come into this knowledge' is, I think, preferable; and is accordingly adopted. In Páli *janasi* and *junè* are both used.

3. तेषां य अभिहारेषु दण्डस्य अतिपातये मकृतः 'of them' the following confiscations (fines) or punishments for neglect of duty 'by me (are) made' (ordained).—*Abhihára*, confiscation or seizing in presence of the owner. *Atipáta*, transgression or omission of duty.

4. अश्वत्थ अभित: 'around the *aswattha*' holy fig-tree or (ficus religiosa). If the á be long, the word would signify, 'without fear, fearless.'

5. कर्मणि प्रवर्तयन्ति, 'circumambulations must be practised'—or कर्माणि 'pious acts,' will be closer to the original. To the termination *ave* the other lats add *ti* in this and the following instances. The former agrees with the vernacular *hovè* 'let be,' the latter with the Sanskrit भवन्ति 'is to be.' The former is perhaps derived from the Sanskrit future participle*lar* termination *tavye* or *aviye*.

6. जनस्य जनपदस्य हितसुखं उपदा भवति—'of the village and its inhabitants (including animals) the benefit and pleasure, a small present or offerings (उपदा a nazar), shall be.'

shall they enjoy prosperity or adversity: and they shall give thanks for the coming of the faith. Whatever villages with their inhabitants may be given or maintained for the sake of the worship, the devotees shall receive the same and for an example unto my people they shall follow after, (or exercise solitary) austerities. And likewise, whatever blessings they shall pronounce, by these shall my devotees accumulate for the worship (?). Furthermore the people shall attend in the night

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6 *anugahinéva chá* 7 *sakhíyana-dukhíyanam janisanti* 8 : *Dhammayatenacha*
7 *viyo vadisanti* 9. *Janamjanapadam kintihi datamcha palitam cha*
8 *aladhayevuti* 10 *rajakápilahanti ; patichalitavemaṇ pulisánipi mè*
9 *chhandaṇṇáni patichalisanti* 11, *tepi cha káni viyo vadisanti : yenamerajaká*

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7. अनुग्रहेणैवच, ' through their benevolence *or otherwise*,' that is in proportion to their bounty.

8. सुखीयन्तः दुःखीयन्तः जानिष्यंति, ' shall they become prosperous or unfortunate,' according to the pandit ; but a nearer approach to the construction of the text may be formed ; सुखिनं दुःखिनं ज्ञास्यन्ति, ' shall know good or bad fortune.'

9. It is best to regard धर्म्मायतेन as a compound of *dharma* and *áyatam*, length, endurance,—or (from *áyat*), ' the coming.' The word *viyo* is unknown to either the Sanskrit or the Páli scholar, they suppose it to be a term of applause attached to वदिष्यन्ति ' they shall say,' as in the modern Hindví *tumko bhalá kahengé*, they shall say ' well' to you, they shall applaud you. वीभ to praise, may be the root of the expression. It also something resembles the Io of the Greeks, which however like *eheu* is used as an expression of lamentation ; and this meaning accords also with the word *viyo* in CLOUGH's Singhalese Dictionary.—*Viyo, viyov, viyoga*, ' lamentation, separation, absence.' *Viyo-dhamma* is translated ' perishable things' by Mr. TURNOUR, in a passage from the *Pitakáttayan*. See p. 523.

10. जनः जानपदः किंचिद्दिन्नञ्च पालितञ्च आराधे भवति, perhaps the ' some little' given of the inhabitants of the village, and preserved, shall be on account of worship,' (or they shall give trifling presents to make *pújá ?*)

11. This passage is rather obscure in its application to the preceding, the pandit reads रक्षकाश्चपिलपन्ति, ' the devotees also speak,' but the letter *p* is uncertain, and I would prefer लास्यन्ति, shall receive. प्रतिचलिते पुजयाश्चपि म छन्दानि प्रतिचलिष्यन्ति, and having proceeded my devotees shall obtain the sacred offering of chandan ;—छन्दं being read by the pandit as चन्दन, sandal-wood, an unctuous preparation of which is applied to the forehead in *pújás*, but the aspirated *ch* makes this interpretation dubious : *chhandani* are solitary private (occupations) or desires.

the great myrobalan tree and the holy fig-tree. My people shall foster (accumulate) the great myrobalan. Pleasure is to be eschewed as intoxication (?).

My devotees doing thus for the profit and pleasure of the village, whereby they (coming) around the beauteous and holy fig-tree may cheerfully abide in the performance of pious acts. In this also are fines

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10 *chappanti áradhayitave* 12. *Athá hi pajaṇ viyatáye dhátiye nisi jate* 13
11 *asvathè hoti ; viyata dhâti chappati me pajan* 14 ; *sukham haṭá hátave (ti)* 15.
12 *hevam mama rójaká kaṭé* 16, *janapadasa hitasukhâye, yena ete abhitá*

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12. An unknown letter 𑀬 in the word *chayanti* or *chapanti* leaves this sentence in the same uncertainty. Adopting the former we have येन मे रञ्जका चयन्ति आराधयितुं, 'by which my devotees (may) *accumulate* for the purpose of the worship :—to pay the expenses of the worship from the accumulated *nazars* and offerings.'

13. A new subject here commences. अथादि प्रजा वियतायै धात्र्यै निशि यातु, 'moreover let my people frequent the great myrobalan trees (which also the Hindus prize very highly and desire to die under) in the night.' Thus reads the pandit, but the last word is जातु, not *yatu ;* and it may be an adverb implying 'occasionally'—or prohibiting altogether. *Viyatáye* may also mean 'for the learned,' *viyatá* in Páli being a scholar : in which case I should understand निशिजात as the name of some third tree (like निशिपुष्प the *nyctanthes tristis* or निशादृश् the white water-lily which opens its petals (or smiles at night) so as to connect the *dhátri* with the *asvattha* अश्वत्थ, or holy fig-tree, thus : अथादि प्रजविवतायै धात्री निशिजाति अश्वत्थश्च भवति, 'the *dhátri*, *nisijáti* and *asvatha* shall be for the learned.'

14. The same expression here recurs : वियत धात्रीं (or धात्र) चयति मे प्रजं, 'my people accumulates (or plants?) the auspicious, or the great myrobalan'—perhaps चयति 'caresses' is be preferred in both places.

15. A new enjoinder ; सुखंहला हातवं or, following the Bahra and Mathia texts, हातंभवति, may mean 'the pleasure of drink (हला vinous liquor) is to be eschewed, but for this sense the words should be inverted, as हलासुखं. The exact translation as it stands is, 'pleasure, as wine must be abandoned,' a common native turn of expression,—'do this,—(as soon) take poison.'

16. *Kaṭé* must here be read as कृत्वा—my devotees having done the foregoing.

and punishments for the transgressions of my devotees appointed. Much to be desired is such renown ! According to the measure of the offence (the destruction of *viyo* or happiness ?) shall be the measure of the punishment, but (the offender) shall not be put to death by me. Banishment (shall be) the punishment of those malefactors deserving of imprisonment and execution. Of those who commit murder on the highroad (dacoits ?) even none whether of the poor or of the rich shall be injured (tortured) on my three especial days (?). Those guilty of

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13 *asvatha saṇtaṃ avimaná kamáni pavatayevuti* 17 : *Etena me rajakánaṇ*
14 *abhiháreva daṇḍevá atapatiye kaṭe* 18. *Ichhátaviyehi esá kiti* 19 *!*
15 *viyohara samatácha siya daṇḍa samatácha ; ava ite pichame avuti* 20.
16 *Baṇdhana badhána muhisánaṃ tirita daṇḍana* 21 ; *pata vadhánaṃ tinne divasáni me*
17 *yote* 22 *dinnenáti kávakáni nirípayitahanti* 23 ; *jivitaye tánaṃ* 24

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17. अभितः, अश्वत्थसंतं अविमनः 'around the holy tree cheerful.' कर्मेषां प्रहृत्तये भवन्ति, 'shall they be in the performance of pious acts.'

18. A new subject: एतेन मरञ्जकानां अभिहारो वा दंडो वा अतिपातायं कृतः, 'in this (edict) confiscations (or fines) and punishments for the transgressions (or non-fulfilment) of my devotees are appointed.'

19. A curiously introduced parenthesis, दुरितव्याहि एषा कीर्तिः, 'much to be desired is such glory !'

20. वियोहर, destroying *viyo*, happiness or 'well' (as we say 'let well alone') ..... समता च स्यात् दंडसमता च, 'according as the measure of the offence may be so the measure of punishment,'—something is wanting to make the next word intelligible *avaitè*, &c. as if अवहताऽपि च मे अमरिषन्ति, 'but they shall not be put to death by me.'

21. बन्धन वधार्ह मनुष्याणां तीर्थदंडन—'of men deserving of imprisonment or execution, pilgrimage (is) the punishment (awarded) ?' This, the only interpretation consonant with the scrupulous care of life among the Buddhists, is supported by the genitive case of *munisánám* :—yet a closer adherence to the letter of the text may be found in तीरित दण्डन, 'the adjudged punishment.' If by तीर्थ, pilgrimage, be intended, 'banishment,' there is no such disproportion being the punishment awarded as might be at first supposed. It is in the eyes of natives the heaviest infliction.

22. The general meaning of this sentence can easily be gathered, but its construction is in some parts doubtful, the words पात (or पथ) वधानां

cruelly beating or slaughtering living things, having escaped mutilation (through my clemency) shall give alms (as a deodand) and shall also undergo the penance of fasting. And thus it is my desire that the protection of even the workers of opposition shall tend to (the support of) the worship; and (on the other hand) the people whose righteousness increases in every respect, shall spontaneously partake of my benevolence.

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18 *nâsaṇtam vâ ni ṛipayitâ dânaṃ dahanti* 25 *paritikaṃ*, 26—*upavâsaneva kachhanti* 27.
19 *Ichhâhi me hevaṃ nirodhasipi kârasi palitaṃ aradhaye vuti ; janasacha*
20 *varhati vividha dhaṃma charane, sayame dânasa vibhâgeti* 28.

चोरिदिवसानि follow the same idiom as above—the three days of (or for) the highway robbers or murderers: मे, my, generally placed before the verb or participle (as *me kate* passim) inclines me to read *yote* as भवति or भवन्ति though usually written *vute*.

23. *Dîne nâtikavakâni* is transcribed by the pandit दीने नाधिकवाक्यानि, 'among the poor people, blasphemies, or atheistical words,' but this does not connect with the next word *ni ṛipayihaṇti*, where we recognize the 3rd plural of the future tense of root ऋफ to hurt or injure रेफिष्यन्ति with the prohibitive नो, not, prefixed. Perhaps it should be understood दीनेनार्थे (janè) केचित 'neither among the poor or the rich shall any whatever (criminals) be tortured (or maimed).'

24. Here are two other propositions coupled together नानं नाशंतंवा *ṭânam* I think should be ताडं beating, and नाशं destroying—*jîvitayêtâraṃ*, might thus be cruelty to living things. But I adopt this correction only because I see not how otherwise sense can be made.

25. दानंदाहन्ति must be the vernacular corruption of दानं दास्यन्ति—'they shall pay a fine, or give an alms.'

26. पारत्रिकं relating to the other world, just as we should say, a *deodand* should be levied: उपवासं वा गच्छन्ति, lit. 'or they shall go and fast.'

27. A doubtful passage for which I venture thus: इच्छाहिमे इयं निरोधस्य पिकारस्य पालितं आराधाय भवति, 'It is my desire thus that the cherishing of these workers of opposition shall be for the (benefit) of the worship,' meaning that the fines shall be brought to credit in the *vihâra* treasury?

28. The wind-up is almost pure Sanskrit: जनस्य च वर्द्धते विविध धर्मचरणं संयमे दानस्य विभागेति—'lit. and of the people as increases in every respect the walking in the path of virtue, so shall they of my charitable donations have division;' or perhaps स्वयं 'spontaneously.'

Translation of the Inscription on the Southern compartment.

Thus spake king DEVÁNAMPIYA PIYADASI:—In the twenty-seventh year of my anointment. The following animals shall not be put to death; the parrot, the maina (or thrush), the wild duck of the wilderness, the goose, the bull-faced owl, the vulture, the bat, the *ambáka-pillika*, the raven, and the common crow, the *vèdavèyaka*, the adjutant, the *sankujamava*, the *kaḍhaṭasayaka*, the *panasasesimala*, the *sáṇḍaka*,

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Line,	Transcript of the Inscription on the South compartment.
1	*Devánampiya piyadasi Laja hévam áhá. Saḍḍavisati vasa*
2	*abhisitename* 1. *Imáni játáni avadhiyáni kaṭá ti seyaṭhá* 2.
3	*Suke, sáliká* 3, *áraṇe-chakávāke, haṇsa, nandimukhe* 4, *gerāté* 5
4	*jatukā, ambá kapilika* 6, *daḍi, anaṭhi kamave* 7, *vèdavèyakè* 8,

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1. The words *iyam dhamma lipi likhapitá* are here to be understood; otherwise the abstaining from animal food, and the preservation of animal life prescribed below must be limited to the year specified, and must be regarded as an edict of penance obligatory on the prince himself for that particular period.

2. In Sanskrit this sentence will run इमानि जातानि अवध्यानि कृतानि इतिः यथा. The *Radhia* and Mathia versions have *avadhyani*, the *y* being subjoined, both here and in the two subsequent instances of its occurrence.

3. सारिका a species of maina. The classical name of this bird, *turdus salica*, follows the vernacular orthography of the inscription.

4. In Sanskrit अरण्यचक्रवाक हंस नंदिमुख: the first of the three is precisely 'the wild-duck of the wilderness; the modern *chakwi-chakwa*, (anas casaca, the brahmany duck)—the last is not to be found in dictionaries, but I render it 'owl' on the authority of KAMA'LAKA'NT who says rightly that this bird may alone challenge the title of 'bull-faced!'

5. The nearest Sanskrit ornithological synonyme to *gèrá a* is गृध्र the *giddh* or vulture, which I have accordingly adopted. *Jatuka*, the bat, is the same in Sanskrit, जातुका.

6. *Ambá kapiliká* is unknown as a bird. The name may be compounded of the Sanskrit words अंबा mother, and कपिलिका, a tree bearing seed like pepper, (pothos officinalis:) perhaps therefore some spotted bird may have received the epithet.

7. The next two names are equally unknown: but the former may represent the *daṇḍi kák* दंडिकाक, or raven of Bengal; and the latter in this case may be safely interpreted the common crow, 'the thing of no value,' अनर्थकर्म, as the word imports.

8. The next word *vedaveyake* may be easily Sanskritized as वेदवचक (disbelieving the vedas) but such a bird is unknown at the present day.

the *okapaḍa*, those that go in pairs, the white dove and the domestic pigeon. Among all fourfooted beasts the following shall not be for food,—they shall not be eaten: the she-goat of various kind, and the sheep, and the sow, either when heavy with young or when giving milk. Unkilled birds of every sort for the desire of their flesh shall not be put to death. The same being alive shall not be injured: whether

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5 *gangápuputakè* 9, *saṅkujamavè* 10, *kaḍhaṭa sayakè, paṇṇasa sèsimalè,*
6 *saṇḍake, okapaḍe, parasatè* 11, *setakapotè, gámakapotè ;*
7 *Save chatapadè* 12, *ye paṭibhogaṇ no èti, na chakkádiyati :—Ajakánáni*
8 *eḍakáchá, sukaríchá, gabhiniva payamináva : avadhaya—pataka*
9 *pi chakáni ásaṇmáṇsikè vadhikakaṭè no kaṭaviyè* 13 : *tase sajívè*

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9. The *gangá puputáka* seems to designate a bird which arrived in the valley of the Ganges at the time of the swelling of its waters गंगाप्रपूरक, or in the rains; as such it may be the 'adjutant,' a bird rarely seen up the country but at that season.

10. The *sankujamava* and the two names following it in the enumeration are no longer known. The epithet *karhatasayake* might be applied to the *chikor*, quasi कन्धरशायक sleeping with its head on one side—a habit ascribed in fable to this bird according to the pandit: or it might be rendered कर्करेटु or करेटु the Numidian crane. The *panasasesimala* may derive its name from feeding on the *panasa* or jàk fruit.

11. I feel strongly inclined to translate these three in a general way as the perchers, सुंडक, the waders or web-footed, रेखपद; and those that assort in pairs परसङ्गत. The first epithet might also apply to the common fowls in the sense of *capon*. The mention of the wild and tame pigeon immediately after the above list obliges us to regard all included between the known names at the commencement, and these winding up the list, as birds; or nearly allied to the feathered race: otherwise *panasasesimare* might easily be broken into पनस, a monkey, and सिंशुमार, the gangetic porpoise; and in the same way *rekapade*, (रेखपद) might be aptly translated, frog: *sandak*, *sadaka*, or *salaka*, शलकी the porcupine.

12. The sense requires that a new paragraph should begin with this word although from the final *e* of the preceding list they might seem all to be classed together in the locative case. As a noun of number *sasechatupade* may remain singular:—in Sanskrit the sentence would run स चतुष्पदेषु ये प्राणिनोऽभोजनं नोपयन्ति न चक्षाद्यन्ते: *ye* should equally govern a plural verb in the text, where perhaps the anuswara is omitted accidentally in *èti* and *chakkádiyati*.

13. This paragraph as translated in the text would run in Sanskrit with very slight modification अजकजातीय एडकाच शूकरीचगर्भिणीवा पयसि

because of their uselessness, or for the sake of amusement they shall not be injured. Animals that prey on life shall not be cherished.

In the three four-monthly periods (of the year) on the evening of the full moon, during the three (holy) days, namely, the fourteenth,

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10 *no ripetaviye* 14; *dáie anathayeá vihásiyeá no ripeyitaviyè* 15:
11 *jivènajivè no pusitaviyè* 16. *Tisuchátummásisu tisáyam punnamásiyam*

म्योवा अवध्या पतगा चपिच के एषांमांसाय वधक्रिया नेा कर्त्तव्या. But the expression is awkward from the repetition, (particularly in the original) of the participle *kakaṭe* with its gerund *kataviye*. Another very plausible reading occurs to the pandit; making *ásanmasike vadhi kakaṭe* represent the three holy months of the Buddhist as of the brahmanical year:—आश्विनमासि भाद्रे कर्कटे, 'in the months of *Aswina*, *Bhádra*, and *Karkaṭa* (or Kártik), to which these prohibitions would particularly apply: but there are two strong objections to this reading, 1st, that the order of the months is inverted, *Kártik*, the first in order being found last in the enumeration; and 2nd, the gerund *kataviye* would be left without specification of the act prohibited. Neither of these is however an insuperable objection, as the act had been just before set forth, and the months may be placed in the order of their sanctity. The construction of the succeeding passages may determine which reading is entitled to a preference.

14. This passage varies little from the Sanskrit तत्रैषाजीवा नेा रेफितव्याः from the root रफ to hurt, or injure. I was led to this root from the impossibility of placing the letter 𑀧 of the inscription in any other place in our alphabet than as रफ. In the Girnar inscription the ordinary र or *r* is rendered by 𑀮 which is not to be found in the láts of *Delhi*, *Allahabad*, &c. where *r* is always expressed by 𑀮 *l*, or a curved form of *r* 𑀮, nearly similar in figure. Adding the vowel mark 𑀺 or *i*, we have precisely 𑀧 to express the short sharp *ri*, in which the burring sound of the *r* is not convertible so easily into the more liquid sound of *l*. The aspirated letter फ *ph* must necessarily be represented by simple 𑀧 *p*; at least the corresponding aspirate has not yet been met with on the stone.

15. The Sanskrit version of this passage hardly differs from the *Magadhi*, तावन्तः अनर्थायैवा विहास्यावा नेा रेफितव्याः. The termination differs only from the circumstance of the Sanskrit masculine or feminine being replaced by the neuter in the vernacular, as in the Páli language. The contrast, "whether *useless*, or whether for amusement," does not sound to us so striking as 'whether for use or for amusement,' might have done; but the meaning of the injunction is that even the uselessness of the object shall not be an excuse for depriving it of life.

16. *Jivénajive* 𑀚𑀻𑀯𑁂𑀦𑀚𑀻𑀯𑁂 might admit of three interpretations: 'alive or not alive'—*jiva najivè*, *i. e.* either living or dead, but this is at variance with the gerund 𑀦𑀺𑀧𑁄𑀲𑀺𑀢𑀯𑁆𑀬𑀸, Sanskrit नोपोषितव्याः not to be nurtured. Again जीवञ्जीव is one name for a pheasant, or chakór. But the most obvious and most accordant interpretation is 'that which liveth by life,' to wit a carnivorous animal; which a strict Buddhist could not countenance with consistency.

the fifteenth, and the first day after conjunction, in the midst of the *uposatha* ceremonies (or strict fasts), unkilled things (or live fish ?) shall not be exposed for sale. Yea, on these days, neither the snake tribe, nor the feeders on fish (alligators) nor any living beings whatsoever shall be put to death.

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12 *tiṇṇidivasáni chávuḍasaṃ paṇṇaḍasaṃ paṭipaḍáyè dhaváyèchа* 17
13 *anuposatham machhè* 18 *avadhiyè nо[illegible]ketaviyè : etáni (yevá) divasáni*
14 *nágavanasi-kevaṭabhogasi yáni aṇṇáni pi jívanikáyáni*

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17. We now come to the specification of those days wherein peculiar observance of the foregoing rules is enjoined. चिषु चातुर्मास्यषु seems to embrace the whole year, 'in the three four-monthly periods, or seasons :' the expression 𑀢𑀺𑀲𑀬𑀁 𑀧𑀼𑀡𑁆𑀡𑀫𑀸𑀲𑀺𑀬𑀁 *tisáyaṃ puṇṇamásiyaṃ* might admit of translation as 'the third full moon,'—but a closer agreement with the Sanskrit is adopted in the text by making the 𑀬 which in fact on the stone is separated from the rest, an expletive, quasi तु सायं पौर्णमास्यं 'the evening of the full moon' generally: and this agrees with the Hindú practice—see Sir WILLIAM JONES' note on the calendar (As. Res. III. 263) where a *syámápuja* is noted for the 15th or full moon of Aswina (Kártika) a day set apart for bathing and libations to *Yama*, the judge of departed spirits. It will be remarked that the numbers *tinni, chávuḍasam, paṇṇaḍasam*, are almost as near to the modern Hindí words *tín, chauda, pandara*, as to the genuine Páli, *tíni* (neuter), *chuddasa* and *pannarasa*, three, 14th and 15th. The *paṭipad* (Sanskrit प्रतिपद्:) is the first day after the full; the Hindus keep particularly the *pratipat* of the month Kártika (*dyúta pratipat*) when games of chance are allowed. *Dhaváye*, I have translated 'current' (Sanskrit धवत्य:) although this word has rather the signification of 'running' in an active sense.

18. The *anúposatham* or rather *uposatha* is a religious observance peculiar to the Buddhists; उपोषण, a fast, hardly expresses enough: it requires an abstinence from the five forbidden acts to the laity, or the 8 and 10 obligatory on the *upásikas*, disciples, and *Samaneras*, (priests.) 1, destroying life; 2, stealing; 3, fornication; 4, falsehood; 5, intoxication; 6, eating at unpermitted times; 7, dancing, singing and music; 8, exalted seats; 9, the use of flowers and perfumes; 10, the touch of the precious metals. The affix *machhè*, 𑀫𑀘𑁆𑀙𑁂 is equivalent to the Sanskrit मध्ये or the Páli *majjhè*, 'midst;' for in our alphabet the *jh* is always found replaced by *chh*: had it been separated in the text from *anuposatham*, it might have been construed with the ensuing words, 'fish unkilled are not to be exposed for sale (during the days specified), Sanskrit मत्स्य अवध: नोपि विक्रेतव्य: As it stands however *avadhya* must refer either to 'things unkilled' or the things whose slaughter is above interdicted

On the eighth day of the *paksha* (or half month) on the fourteenth, on the fifteenth, on (the days when the moon is in the mansions of) *tirshя* and *punarvasuna;* on these several days in the three four-monthly periods, the ox shall not be tended: the goat, the sheep, and the pig, if indeed any be tended (for domestic use), shall not then

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15 *nohaṇtaviyáni* 19. *A hamipakhдyè* 20, *chдvadasдyé, paṇṇadasдye, tisдyè*
16 *punavasune* 20 *tisuchдtumasi suṇsu divasдye gonè nonilakhitaviye* 21.
17 *Aj ikè, eḍakè, sukalè, evдpiaṇṇè nilakhдyati no nilakhitaviyè* 22.

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must not be sold. The Buddhist scriptures count among the *uposatha divasáni* or fast days, the *panchami, atthami, chátuddasi* and, *pannarasi* or full moon of every month. The first of these is not alluded to in our text, and the *pratipat* is perhaps included in the 15th day, which begins with the evening of the full and reaches into the day after.

19. The interdiction is here extended to snakes and alligators, the most noxious and destructive reptiles: at least *nágavansi*, and *kevaṭabhogasi*, Sanskrit नागवंशीयाः कैवर्त्तो भोग्याः 'the generation of nágas, and the feeders on fish,' admit of no better explanation. The whole sentence is perfectly Sanskrit, except that the neuter gender is substituted according to the Páli idiom (?) in lieu of the Sanskrit masculine.

20. ꤢꤟꤢꤵꤗꤢ *athamipakháye*, Sanskrit अष्टम्यां पक्षयोः means the eighth day of each *paksha* or half-month; but perhaps it alludes particularly to the *góshthдshtami* of Kártika, when according to the *Bhima parдkrama* 'cows are to be fed, caressed and attended in their pastures; and the Hindus are to walk round them with ceremony, keeping them always to the right-hand*.'

21. As *punavasune*, पुनर्वसुनि, is one of the nakshatras or lunar asterisms, (the 7th,) the preceding word *tisáye* must be similarly understood as तिष्ये the asterism *Pausha*. For the reverence paid to this lunar day see the preliminary remarks. Otherwise it might be rendered त्रिंश्ये *trinsye* (*tithi*) on the 30th or full moon, as *pannadasa* the 15th is employed for the *amávasi*, or new moon; but against this reading it may be urged that the vowel *i* should be long (as in the Hindí *tísain*): and again the enumeration of the days in the luni-solar calendar is never carried beyond the 15th; for as the lunar month contains only 28½ solar days, there would be great trouble in adopting the second period of 15 *tithis* or lunar days to them continuously without an adjustment on the day of change.

22. Sans. गावो नो निरीक्षितव्या, 'cattle shall not be *looked at*,' or regarded with a view to employment. Were the word simply *no-rakhitaviye* it would imply that they were not to be 'kept' for labour on such days. See the foregoing note.

* Sir W. JONES on the Lunar Calendar, As. Res. III. 266.

be tended. On the *tirsha* and the *punarvasuna* of every four months, and, of every *paksha* or semilunation of the four months, it is forbidden to keep (for labour) either the horse or the ox.

Furthermore in the twenty-seventh year of my reign, at this present time, twenty-five prisoners are set at liberty.

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18 *Tisáye punávasune chátummásiyè chatummásipakhdyè, asvasá gonasá*
19 *lakhanè nokaṭaviyè* 23 : *yáva saḍḍavisatiwasa abhisitènamè etáyè*
20 *antalikayè pannavisati bandhana mokhdni kaṭáni* 24.

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23. The expression *nirakkitaviye* is here applied to the other domestic animals with the remarkable addition *evápi anne nirakhiyati* 'if any such is regarded at all for such purpose,' Sans. एवापि अन्य निरीक्ष्याः or रक्ष्या implying that such animals were then bred for food.

24. 'On the *tishya* and *punarvasu* days of the *nakshatric* system' must here be understood; as the term 'of every four months, and every four half-months would otherwise be unintelligible. The division of the Zodiac into 28 asterisms, each representing one day's travel of the moon in her course is the most ancient system known, and peculiar to the Hindus. From the motion of the earth, it will follow that the moon will be in the same stellar mansions on different days of her proper month at different times of the year, hence the impossibility of fixing their date otherwise than is here done. Although the nakshatras days do not seem now to be particularly observed, yet they are constantly alluded to in the narration of the first acts of the priests.—See observations on this head in the preface.

We find the word *rakhane* (S. रक्षणं नो कर्त्तव्यं) now introduced, so that it was purposely reserved for application to the beasts of burthen in the climax of the prohibitory law, 'horses and oxen shall not be tied up in the stall on these days!' The termination in è in this and the former instances is curious. It is the 7th case used like the Latin ablative absolute, even with the gerund.

25. The concluding sentence requires no comment being, except as to genders, identical with the Sanskrit, यावत् सप्तविंशतिवर्षं अभिषिक्तेन मया एतस्यां अन्तरिकायां पञ्च विंशतिबन्धन मोक्षः कृतः, 'Moreover by me having reigned for twenty-seven years, at this present time, five and twenty liberations from imprisonment (are) made.' The verb 'are' or 'shall be' being understood. It is perhaps ambiguous whether 'in this interval' applies to the duration of the 27th year, or to the time previously transpired, *yávat* signifying both 'until, up to;' and 'as long as, when.'

Translation of the Inscription on the Eastern compartment.

Thus spake king DEVÁNAMPIYA PIYADASI :—In the twelfth year of my anointment, a religious edict (was) published for the pleasure and profit of the world; having destroyed that (document) and regarding my former religion as sin, I now for the benefit of the world proclaim the fact. And this, (among my nobles, among my near relations, and among my dependents, whatsoever pleasures I may thus abandon,) I therefore cause to be destroyed; and I proclaim the same in all the

Line,	Inscription on the East side of the column.
1	*Devánampiya piyadasi Lája hèvaṃ áhá. Duwadasa*
2	*vasa abhisittenamè, dhammalipi likhapita* 1 *lokasá*
3	*hitasukhâyè* 2 : *sètaṃ apahátá* 3, *tamtam dhammavaḍhi pápová*
4	*hevam lokasá hètavakhati pativekhámi* 4. *Atha iyam* 5 :—
5	*nátisu,* 6 *hevam patiyâsaṇṇesu, hevam apakaṭhesu*

1. The omission of the demonstrative pronoun *iyam*, this, which in the other tablets is united to *dhammalipi*, requires a different turn to the sentence, such as I have ventured to adopt in the translation: In the 12th year of his reign the rája had published an edict, which he now in the 27th considered in the light of a sin. His conversion to Buddhism then must have been effected in the interval, and we may thus venture a correction of 20 years in the date assigned to PIATISSA'S succession in Mr. TURNOUR'S table, where he is made to come to the throne on the very year set down for the deputation of MAHINDA and the priests from ASOKA'S court to convert the *Ceylon* court.

2. I have placed the stop here because the following word, *setam* seemed to divide the sentence 'an edict was promulgated in the 12th year for the good of my subjects, so this having destroyed, or cancelled, I—' *setam* seems compounded of *sa* employed conjunctively as in modern Hindí, and *etam* this.

3. *Apahátá* अपहता (is) abandoned: viz. the former *dhammalipi setam* (neuter) is perhaps used for सेयं *sá-iyam* (feminine) so, that; or supplying the word कर्म it may run in the neuter तदेतत् अपहतं and continuing तत्तत (Páli *tam-tam*) धर्मवर्द्धिपापायैव this (being) as it were a sin according to *dharma vardhi* (my new religion, so), the expression being connected by *tatpurusha samása.*

4. The text has *pètavakhati*, which may be either read *hitavakhati* (S. हितव्याख्याति) a description for the benefit; or *hetu vakhati* (S. हेतुव्याख्याति) 'description for the sake,' to wit लोकस्य of mankind. 4. *Paṭi vekhámi* (vakhámi) S. प्रतिवक्ष्यामि I now formally renounce,—the affix *prati* gives the sense of *recantation* from a former opinion.

5. *Lipi* or *kathá* understood to agree with *iyam*; *atha iyam*, may be rendered "furthermore."

6. Sanskrit, नाथेषु, प्रत्यासन्नेषु, उपकटेषु, among lords, companions, and lieges. The last word may also be read अकपटेषु, among the sincere or faithful (adherents).

congregations; while I pray with every variety of prayer for those who differ from me in creed, that they following after my proper example may with me attain unto eternal salvation: wherefore the present edict of religion is promulgated in this twenty-seventh year of my anointment.

Thus spake king DEVÁNAMPIYA PIYADASI:—Kings of the olden time have gone to heaven under these very desires. How then among mankind may religion (or growth in grace) be increased? yea through the conversion of the humbly-born shall religion increase.

6	*kimaṇkáni sukham avahámáti* 7; *tathacha vidahami*; *hèmèvá*
7	*savanikáyesu paṭivekhámi* 8; *savapásaṇḍapimè pujitá*
8	*vividháya pujáyá echa iyam átaná pachupagamanè*
9	*sèmè mokhyamatè* 9. *Saḍḷavísativasa abhisitènamé*
10	*iyam dhammalipi likhapitá.*
11	*Devánampiya piyadasi Lájá hevam áhá. Ye atikata*
12	*ataraṃ rájaṇnè* 10, *hesa hevaṃ ichhásu. Kathaṃ jane*
13	*dhaṃmavaḍhiyá vadhèyá? nichajaṇne* 11 *anuriṃpáyá dhammavadhiyá*

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7. Sanskrit, कियन्ति यत्यहं अवजहामि इति, 'how many pleasures I forego;' तथाच विदहामि, 'and I altogether burn and destroy.'

8. *Hemevá*, for *imaṇva* or *imaneva*, Sanskrit, इमं एव सर्व्वं निकायेषु प्रतिवक्ष्यामि—*nikáya*, an assembly, may signify the congregations at each of the principal *viháras* or monasteries.

9. The construction of this passage is not quite grammatical: *echa* must be read *evamcha*; then in Sanskrit इदं आत्मनः पश्चादुपगमने या मे मोक्षमने, 'this (is) for the following after (or obedience) of the soul (myself) as connected with my faith or desire of salvation,'—the word *upagamane* in what is called the *nimitta saptami* case. I have given what appears the obvious sense.

The inscriptions at *Allahabad*, *Mathia* and *Bakra* all end with this sentence; and there is an evident recommencement in the Feroz tablets as if the remainder had been superadded at a later period.

10. I am by no means confident that the precise sense has been apprehended in the following curious paragraph. The word *katham*, how, implies a question asked, to which the answer is accordingly found immediately following, and a second question is proposed with the same preliminary "thus spake the rája" and solved in like manner, each term rising in logical force so as to produce a climax, that by conversion of the poor the rich would be worked upon, and by their example even kings' sons would be converted; thus shewing the necessity and advantage of continual preaching. For *atikata*, my pandit reads *atikránta*, making the whole line; ये चतिक्रान्ता अतरञ् राजानः एवं एवं इच्छासु कथञ्जने

Thus spake king DEVÁNAMPIYA PIYADASI:—The present moment and the past have departed under the same ardent hopes. How by the conversion of the royal-born may religion be increased? Through the conversion of the lowly-born if religion thus increaseth, by how much (more) through the conviction of the high-born, and their conversion, shall religion increase? Among whomsoever the name of

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14	*vadhíthá etaṃ. Devánampiya piyadasi Lája hevam ahá. Esama*
15	*hutha átikaṇtaṇcha* 12 *aṇtaraṃ heṭaṃ ichhásu rájaṇne katham janne*
16	*anurúpáyá dhamma vaḍhiyá vaḍheyáti* 13 ? *naichajane anurupáyá*
17	*dhamma vaḍhiyá vaḍhithá: se kina sujaṇè anupatipajáyá*
18	*kina sujane anurúpáyá* 14 *dhamma vaḍhiyá vaḍhiyáti; kinasukaṇi*

धर्मेष्टद्धिः वर्द्धेत ? *ataran* 3rd. per. pl. 1st. pret. from त्र went to heaven, 'as ancient princes went to heaven under these expectations (departed in the faith) how shall religion increase among men through the same hopes?'

11. The first syllable of this word should perhaps be read *no,—nochajanne*, though differently formed from the usual vowel *o*: nor will the meaning in such case be obvious. By adopting the pandit's modification *nichajanne*, 'vile born' we have a contrast with the *sujanne*, well born of the next sentence: thus नीचजन अनुरूपायते धर्मेष्टद्धीः वर्द्धेयय; but though the ⊙ *tha* of the word *vaḍhitha* belongs only to the second person plural and requires the noun to be placed in the objective case, 'you increase religion,' I incline to read it as a corruption of the future tense *vaḍhisati*, or the potential *vaḍheyát*.

12. The letter *h* in *esa mahurtta* (मुहूर्त्त an hour, 15th of the day or night) being rather doubtful, I at first took it for a *p* and translated: 'as my sons and relations,' एव मे पुत्रा अंतिकस्याच अतरन्. But it was remarked that only for the *anuswara*, thrice repeated, the word *aṇtikaṇtaṇ* would be precisely the same as *atikata*, above rendered by *atikránta*. The same meaning would be obtained again, by making *putha* the Sanskrit पूता, pure, virtuous: 'my virtuous ancestors' but on the whole *muhurtha* is to be preferred as being nearest to the original.

13. The verb is here written 𑀯𑀟𑁆𑀳𑁂𑀬𑁆𑀬𑀸𑀢𑀺 *vadhèyáti*, the *ti* being perhaps the intensitive or expletive तु or इति added to the *vadheyá* of the preceding sentence.

14. किन्सुजने अनुपदे प्रजायां किन्सुजने अनुरूपायां, 'what (may not be effected) towards the convincing and converting of the upper classes?' The word *anupatipajaya* however, from former analogy will be better rendered by the Sanskrit *anupratipadyè* अनुप्रतिपद्ये, which will then require अनुरूपे to agree with *sujané*.

God resteth (?) verily this is religion, (or verily virtue shall there increase.)

Thus spake king DEVÁNAMPIYA PIYADASI:—Wherefore from this very hour I have caused religious discourses to be preached; I have appointed religious observances—that mankind having listened thereto shall be brought to follow in the right path and give glory unto god, (*Agni.* ?)

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19 *a (ḍyaṇá) mayè ham* 15 *dhamma vadhiyáti etam. Devánampiyu piyadasi Lája hevaṃ*

20 *ahá. Esamehutha dhammasávaṇáni sávapayámi dhammánusathini*

21 *anusásámi* 16. *Etaṃ jane suta anupaṭipajisati* 17 *aguiṃ namisati* 18.

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15. This sentence is unintelligible from the imperfection of two of the letters. The pandit would read क्व न सुखानि अधिगमयेहं धर्म्मावहैत इति: but this appears overstrained and without meaning. The last two words "*dharm* shall increase" point out a meaning, that as (religion and conversion ?) go on, virtue itself shall be increased. *Aḍya* may perhaps be read *Aja.*

16. एषमुहूर्त्ते धर्म्म श्रवणानि श्रावयामि धर्म्मानुहोनि (sub. वाक्यानि) अनुशास्मि, 'at this time I have ordered sermons to be preached (or म पुत्रा to my sons? or पूता virtuous sermons) and I have established religious ordinances.'

17. एतत् जनेषु तु अनुप्रति प्रजनिष्यति 'so that among men there shall be conformity and obedience.' It may be read एतं जनः श्रुत्वा, 'which the people having heard (shall obey), and I have preferred this latter reading because it gives a nominative to the verb.

18. The anomalous letter of the penultimate word seems to be a compound of *g n i* and *anuswara*, which would make the reading *agnim namisati* 'and shall give praise unto, AGNI,' but no reason can be assigned for employing such a Mithraic name for the deity in a Buddhist document. A facsimile alone from the pillar can solve this difficulty, for we have here no other text to collate with the Feroz *lát* inscription. It is probably the same word which is illegible in the 19th line. The only other name beginning with *a*, which can well be substituted, is *Aja*, a name of Brahma, Vishnu or Siva, or in general terms, 'GOD.' Perhaps *Ajá*, 'illusion personified as *Sakti*'—*(Máyá)* may have more of a Buddhistic acceptation.

V.—*Inscription round the shaft of Feroz's Pillar.*

1 [illegible]

2 [illegible] [1] [illegible]

3 [illegible] [5 letters] [illegible] [2 letters] [illegible]

4 [illegible]

5 [illegible]

6 ...

7 ...

8 ...

9 ...

10 ...

11 ...

[The figures in brackets denote the number of letters probably missing in the effaced parts. The initial figures show the commencement of each line, on the pillar, and in the engraved plate of the 7th vol. of Researches.]

Translation of Inscription round the column.

Moreover along with the increase of religion, opposition will increase: for which reason I have appointed sermons to be preached, and I have established ordinances of every kind ; through the efficacy of which, the misguided, having acquired true knowledge, shall proclaim it on all sides (?), and shall become active in upholding its duties. The disciples too flocking in vast multitudes (many hundred thousand souls), let these likewise receive my command—'in such wise do ye too address on all sides (or address comfortably?) the people united in religion.' King DEVÁNAMPIYA PIYADASI thus spake:—Thus among the

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Transcript of the Inscription round the column.

1. *Dhamma vaḍḍhiyá cha bádha 1 vaḍhisati ; etayema aṭhaye dhammasávánáni sávápitáni 2, dhammánusathini 3 vividháni ánápitáni : yatáya (?) pápi bahune janasin áyatá 4 ete paliyo vadisantipi, pavithalapaṇṭipi 5 : rajukápi bahukesu pánasatasahasesu áyatá, tèpimè ánapitá, hevamcha hevamcha paliyo vadatha 6*

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1. The only word suitable here is बाधः, opposition: *Ratna Paula* would read बुद्धि wisdom. There is no such word as बाढ with a cerebral *dh*. The more proselytism succeeded, the greater opposition it would necessarily meet.

2. *Sávápitini* should doubtless be *sávápitani* श्रावापितानि 'caused to be heard.'

3. *Anusathini* (subauditur *vakhyani*). अनुशासनानि, ordinances, would be the more correct expression. आज्ञापिता, ordered, commanded.

4. *Yatáya pápi bahune janasin áyatá.* The first three letters are inserted in dots on the transcript in the society's possession ; it is consequently doubtful how to restore the passage ; a nominative plural masculine is required to agree with *áyatá* and govern *vadisanti*, thus पुरुषा बहूनि जाने एत्य, एते पलियो वदिष्यन्ति. The meaning of *paliye* or *paliyo* is very doubtful : it resembles or contrasts with the *viyo* of a former part of the inscription. The pandit would have परितो 'on all sides'—*viz.* that they should become missionaries after their own conversion.

5. Perhaps प्रवर्त्य लापयन्ति, 'they shall employ others in speaking' (or preaching).

6. The word *vadatha* being in the second person plural वदथ, the *rajaká* रज्जका, beginning the sentence must be in the vocative, 'oh disciples.' But even this requires a correction from *vadátha* to *vadatha*. *Ayatá* and *anapitá*, are equivalent to the Sanskrit एत्य and आनायिताः, having come and being admitted by me,—or आज्ञापिताः, to them it is commanded, which is best because it leads to the imperative conjunction *vadatha*.

present generation have I endowed establishments, appointed men very wise in the faith,—and done .... for the faith.

King DEVÁNAMPIYA PIYADASI again spake as follows:—Along the highroads I have caused fig trees to be planted, that they may be for shade to animals and men; I have (also) planted mango trees: and at every half-coss I have caused wells to be constructed, and (resting-

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2. *janaṃ dhaṃmayutaṃ* 7. *Devánaṃ piye Piyadasi heva aha: eta meva me anuvekhamáne* 8 *dhammathábhani katani* 9, *dhaṃma mahámatá katá* 10, *dhaṃma .....ra kate. Devánam piye Piyadasi lája hevaṃ aha. Mágesu pi me* 11 *nigohání ropápitáni chhóyopagáni hasaṇti pasumanisánaṃ* 12: *ambavabhikyá ropápitá* 13: *aṭhakosayáni pi me udupánáni*

3. *khánápápitáni* 14; *nisi.....picha kálápitá* 15; *ópánáni* 16 *me bahukáni tata*

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7. वदयजनं धर्मयुक्तं, address yourselves to the people endowed with virtue (the faithful).

8. एतदेवमे अनुवीक्ष्यमाण, *etat* here agrees with the sentence, called *kriya viseshan* in Sanskrit. *Anuvekhamáné* 7th case 'among the now apparent,' that is among the present generation.

9. धर्मस्थापनानि कृतानि, 'religious establishments are made,' or perhaps स्तंभा: pillars, made neuter according to the idiom of the Pálí dialect?

10. धर्म महामता: कृता: the very learned in religion are made—*i. e.* wise priests appointed. The succeeding word is erased, and it is unnecessary to fill it up, as the sense is complete without. From the last line of the inscription, where *thambáni* occurs, the missing letter may perhaps be read *ḍh*, *ḍhara*.

11. मार्गेष्वपि मे न्यग्रोधा: रोपापिता:, 'in my roads *nagrodh* trees, (the banyan tree or *ficus indica*) caused to be planted in rows.'

12. क्षायोपगा: भविष्यन्ति पशुमनुष्याणां, 'shall be for giving shade to animals and men.' The whole of this paragraph is smooth and intelligible.

13. *Abavaḍikya* of the small or printed text is in the large facsimile *ambavabhikyá* which leads us to the otherwise hazardous reading of चतष्टचा: 'mangoe trees,' the word *ropapitá* (applied just before to the planting of trees) confirms this satisfactory substitution.

14. अष्टकाशयानि उदपानानि, 'wells at every half coss.'—This passage is highly useful in confirming the value of the letter ⌊ as *u*. *Udupánáni* should be *udapánáni*. *Khánápápitani*, may be rendered खानिवानि caused to be dug, or खात प्रापितानि dug, and made complete—(*pakha.*)

15. Several letters are here lost, but it is easy to supply them *conjecturally* having the two first syllables, *nisi* and the participle *kálápitá*:—निसियानुं आलया: अपिच कारिता:, and houses to put up for the night in are caused to be built.

16. आपानानि are taverns or places for drinking. Space for one letter follows बहु, probably नि;—*tata tata*, Sanskrit ततस्तत:, here and there.

places?) for the night to be erected. And how many taverns (or serais) have been erected by me at various places, for the entertainment of man and beast! So that as the people, finding the road to every species of pleasure and convenience in these places of entertainment, these new towns, (nayapuri?) rejoiceth under my rule, so let them thoroughly appreciate and follow after the same (system of benevolence). This is my object, and thus have I done.

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tata kálápitáni, patibhogáya pasumunisánam 17.... *.Esa patibhogenáma* 18, *vividháyáhi sukháyanáya puli me rájihi mama yácha sukhayite loké; imáncha dhammánupatipati ánupatipajantuti : etadathá mè*

4. *esa kate* 19. *Devánampiye Piyadasi heva áha : Dhamma mahámátá pi me tá bahu vidhesu* 20 *athesu ánugahikesu viyápata, se pavajitánam cheva gihithánam cha sava*

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17. प्रति भोगाय पशुमनुष्याणां, literally, 'for the entertainment of beast and man.' The five following letters are missing, which may be supplied by भविष्यन्ति or some similar word.

18. This neat sentence will run thus in Sanskrit, altering one or two vowels only, एष प्रतिभोगेनाम विविधाय हि (त) सुखायनाय पुरेष्वपि राजीभिः मम सुखायते लोकः इमांच धर्मानुप्रतिपत्ति अनुप्रतिपद्यतु इति. In this the only alteration made are *yatha* for *ya;* and *rájibhi* from *rájihi* (natural to the Páli dialect) the third case of *rájí*, a line or descent. The application of *náma* indefinitely is quite idiomatical. The *ta* may be inserted after *hi*—but it will read without, 'this people as they take pleasure under my dynasty on account of the various profit and well being by means of entertainment in my town (or country), (*tatha* must be here understood) so let them take cognizance of (or partake in) this the fame (or laudable effect) of my religion.' *Purihi rájihi* may also be understood as in town and country, in the translation.

19. This sentence is quite grammatical एतदर्थात् मे (or एतदर्थान्नया) एषकृतः 'from this cause by me this (is) done.'

20. The large facsimile corrects the vowels, *te* for *ta*, *vidhesu* for *vidhasu*, &c. of the printed transcript, *mátá* is the same in both, but in other places we find *matá*. The passage may run: धर्म महामता चपिमे ते बहुविधेषु आर्तेषु अनुग्रहिकेषु व्याप्ताः ते प्रव्रजितानां चैव गृहस्थानां च सर्व्व पाषण्डेष्वपिच व्याप्तासंवृद्ध पिमेकृत इमे व्याप्ता भवन्ति—the word पाषण्डेषु 'among unbelievers' cannot well be admitted here—प्रसन्नतासु, 'with kindnesses and favors' may be the word intended, which though feminine in Sanskrit is here used in the neuter. For *vayapatá*, R.P. would read वयःप्राप्ताः, obtaining age, or growing old—in the latter case the sense will be, that the 'wise unto salvation' growing old in the manifold riches of my condescension and in the favors of the ascetics and the laity growing old—they in the *sanghat* (*sanghatasi* for *sanghate*) or places of assembly made by me—shall attain old age? But *máhamatá*, will be much

Thus spake king DEVÁNAMPIYA PIYADASI :—Let the priests deeply versed in the faith (or let my doctrines ?) penetrate among the multitudes of the rich capable of granting favors, and let them penetrate alike among all the unbelievers whether of ascetics, or of householders : and let them penetrate into the assemblies (?) for my sake. Moreover let them for my sake find their way among the bráhmans and the most destitute : and among those who have abandoned domestic life, for my sake let them penetrate ; and among various unbelievers for my sake

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pásaṇḍesu picha viyápaṭá ; se saṅghathasi pi me kaṭe, ime viyápaṭá hahantiti : hemeva bábhanesu 21 *ajívikesu pi me kaṭe,*

5. *ime viyapaṭá hohantiti ; nigaṭhesu* 22 *pi me kaṭe, ime viyapaṭá hohaṇtiti : náná-pásaṇḍesu pi me kaṭe, ime viyápaṭá hohantiti : paṭivisitha paṭivisitham* 23 *tesu tesu te te mahámátá dhaṃmá mahámáta cha me, etesu cheva viyápaṭá, savesu cha anesu pásaṇḍesu. Devánam piye Piyadasi lája hevam áhá*

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more intelligible if rendered *tenets* or *doctrines*, in lieu of teachers. (See preliminary remarks.)

Should *saṅghat* be a right reading, it gives us the aspirated ग ग्, which is exactly the form that would be deduced from the more modern alphabets ; but if an ह ह्, the sense will be the same. From the subsequent repetition of the proposition *ime vyápatá hahanti* with so many nouns of person in the locative case, it seems preferable to take *arthesu* and *pásaṇḍesu* in the same sense—which may be done by reading the former either as आर्त्तेषु, among the afflicted or frightened, or आर्य्येषु the rich. The verb variously written *papanti, hohanti, hahanti*, &c. may be बाभुवन्ति rather than भवन्ति—in the यङ्लुक् *yaṇluk* tense—'shall be occasionally.' कते here also and further on has the meaning of 'on account of.'

21. We have here undoubtedly the vernacular word for bráhman *bábhanesu* for ब्राह्मणेषु आजीविकेषु among bráhmans (those without trade)—and laity (those following occupations).

22. *Nigathesu*, Sanskrit निर्गतेषु—those who have abandoned home, or religion, or caste.

23. *Paṭivisitha paṭivisitham* (the last म redundant. The pandit would read प्रतिविशध 'do ye enter in or go amongst'—(or stedfastly pursue their object) meaning the *mahámatás* among the people—but this is inconsistent with the *te te* which require प्रतिविशन्तु प्रतिविशन्तु तेषु तेषु ते ते मया मता: बहवो मता: चले, 'among these several parties respectively, these my several wise men and holy men shall find their way.' The double expression throughout is peculiar, as is the addition after the verb of सर्व्वेषु च अन्येषु पाषण्डेषु 'and among all other classes of the Gentiles.'

let them find their way:—yea use your utmost endeavours among these several classes, that the wise men, these men learned in the religion, (or these doctrines of my religion) may penetrate among these respectively, as well as among all other unbelievers.

Thus spake king DEVÁNAMPIYA PIYADASI:—And let these (priests) and others the most skilful in the sacred offices penetrating among the charitably disposed of my queens and among all my secluded women dis-

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6. *Ete cha ane cha bahu kámakhá* 24 *dánavisagasi* 25 *viyápaṭá se mama cheva devínam* 26 *cha, savasi cha me nilodhanasi te bahu vidhena á (da) lena* 27 *táni táni taṭhá yatanáni paṭita* 28 ..... *hida cheva disásu* 29 *cha dálakánam* 30 *pi cha me kaṭe; aṇnánaṁ cha devikumáránam* 31 *ime dánavisagesu viyápaṭa hohantiti, Dhammápadána tháye dhammánupatipatiye* 32 : *esahi dhammápadána*

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24. Here the word बहु कर्म्मका:—is substituted for महामता: —meaning 'the finished practitioners in religious ceremonial'—for *Kámakhá* read *kámaká*, or *kámaṭhá*, कर्म्मठा:—but if *mahamátá* be made '*doctrines*'—*kámaká* must be rendered ceremonial.

25. दानविसर्गेषु 'among the free bestowers of charity,' in the *Páli* the word is used in the singular *dánavisagasi (asmin)* for *danavisagè*.

26. *Devinam* S. मम देवीनां सर्व्वेषु, 'among the whole of my queens' in contradistinction to *ni* (?) *rodhanasi*, which may mean निरुद्धासु 'concubines; separated.'

27. बहुविधेन आदरेण, 'with the utmost respect and reverence,' there is evidently a letter wanting after *á*, which is supplied by a *d*.

28. The pandit here also enables me to supply a hiatus of several letters:—तानि तानि तथा यतानि प्रयत्नु or *paṭita (yantu)* let them (the priests) thus discreetly or respectfully make their efforts (at conversion),—*yatanam*, exertion *pratita*, respectful.

29. *Hida cheva disásucha*, quasi हृदिचेव दिशुच (or दिशासु) 'in heart and abroad, within and without;' the application is dubious. I prefer दृशासु 'with the eyes.'

30. The pandit suggests दाराणां from दारा wife (whence may be formed दारकाणां possessively) of inferior wives, women, but I find दारका 'a son' in WILSON's dictionary and necessarily prefer a word exactly agreeing with the text.

31. अन्येषांच देवीकुमाराणां 'of other queens and princes:' *dánavisagesu* is here put in the plural, which makes it doubtful whether the former should not also be so. (See note 25.)

32. These two words in the 4th case must be connected with the preceding sentence धर्म्मोपादानार्थाय for the purpose of religious abstraction, *dpádánam*, 'restraining the organs of sense,' has however the second *a* long: उपदा (fem.) is a nazar or present, आपदा a calamity; धर्म्मानुप्रतिपत्तये 'for the due ascertainment of *dharma*,' for a regular religious instruction?

creetly and respectfully use their most persuasive efforts (at conversion): and acting on the heart and on the eyes of the children, for my sake penetrate in like manner among the charitably disposed of other queens and princes for the purpose (of imparting) religious enthusiasm and thorough religious instruction. And this is the true religious devotion, this the sum of religious instruction: (viz.) that it shall increase the mercy and charity, the truth and purity, the kindness and honesty of the world.

Thus spake king DEVÁNAMPIYA PIYADASI:—And whateversoever benevolent acts have been done by me, the same shall be prescribed as duties to the people who follow after me: and in this (manner) shall their influence and increase be manifest,—by doing service to father and mother; by doing service to spiritual pastors; by respectful demeanour to the aged and full of years,—and by kindness and

7. *Dhammápaṭipaticha, yá iyam* 33 *dayádáne sachesochave mandavesadhave cha* 34 *lokasa hevam vaḍhisatiti. Devánampiye piya dasi lája hevam áhá, yánihikáni cha mama ya sadhaváni kaṭáni* 35 *tam loke anupaṭipaṇne taṃcha anuvidhiyanti* 36; *tena vaḍhitá cha*

8. *vaḍhisanti cha* 37 *mátá pitísu susúsáyá*;—*gurusu susúsáyá* 38, *vayámahálakaṇaṃ anupaṭipatiyá* 39;—*babhanasamanesu,—kapanavalukesu, aṇaḍa-a bhaṭikesu sam-*

33. *Iyam*, feminine, agreeing with *pratipatti*, the worthier of the two as in Latin.

34. Of these three coupled qualities the two first are known from the north tablet: The third in the large facsimile reads *mandavè sádhamè*, which may be rendered मन्दवेशधमे 'among the squalid-clothed, the outcasts (*lokasa*) of the world.' But though agreeing letter for letter, the sense is unsatisfactory, and I have preferred a translation on the supposition that the derivation of the words is from *madhava*, sweet, bland, and *sádhu*, honest. *Sádhu* is also a term of salutation used to those who have attained *arahat*-hood. See p eceding page 518.

35. यानि ह कानिचिन्मया साधवानि दृतानि, 'whateversoever noble actions by me are done.'

36. तं (for तानि) लोके अनुप्रतिपन्ने तानिच अनुविधीयन्ते 'these things, unto the people who wait upon me for instruction, are prescribed as duties.' विधानं sacred rites enjoined by the *vedas*.

37. तेन वर्द्धिताच वर्द्धयिष्यन्ति. 'By this (means) (those good acts) having increased, shall cause to increase also (the following, good acts; viz.)

38. मातापितृषु शुश्रूषया गुरुषु शुश्रूषया 'rendering service to father and mother, and the same to spiritual guides' the next word *vayá mahálakánam*, is interpreted by R. P. as: 'the very aged'—there is no corresponding Sanskrit word; महालिकानां may be the bald-headed, from ललिक, forehead. A great man is called *barra kapál*, from a notion that a man's destiny is written on his

condescension to bráhmans and sramanas, to the orphan and destitute, to servants and the minstrel tribe.

King DEVÁNAMPIYA PIYADASI again spake :—And religion increaseth among men by two separate processes,—by performance of religious offices, and by security against persecution. Accordingly that religious offices and immunities might abound among multitudes, I have observed the ordinances myself as the apple of my eye (?) (as testified by) all these animals which have been saved from slaughter, and

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paṭipatiyá. Devánaṃpiya Piyadasi laja hevaṃ áhá. Munisánaṃ cha yá iyaṃ dhaṃmavaḍhi vaḍhitá duwehi yeva ákálehi 40 *dhaṃma niyamena cha niṛtiyá cha*

9. *tata cha bahuse dhamma niyamenirítiyiva cha bhuye ; dhaṃma niyame chakho esa ye mè iya ka e* 41. *Imáni cha imáni játani avadhiyáni, annánipi cha bahu dhaṃmánáyamáni* 42 *yáni me katáni : niṛtiya va cha bhuye ; munisánam Dhaṃma vaḍhi, vaḍhitá arihiṃsáye* 43 *bhutánaṃ,*

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forehead :—thus in the *Naishadha ;* when the swan bringing a message from *Damoyanti* is caught by Nala rája, it laments :—

कथं विधातर्मयि पाणिपङ्कजात्तव प्रियाग्रेत्यसदुलिशिक्षिनः ।
वियोक्ष्यसे वज्रभयेति निर्गता लिपिर्ललाटन्तपनिष्ठुराक्षरा ॥ १३८ ॥

"Why, oh Creator! with thy lotus hand, who makest the tender and the cold wife, hast you written on my forehead the burning letter which says, thou shalt be separated from thy mate ?"

39. ब्राह्मण श्रमणेषु छपणबालेषु ओदासभट्टकेषु संप्रतिपत्या. The perversion of the word *bráhman* as *babhan* (before alluded to) is common now in some provinces. The *sampratipatti* or condescension to these classes, is contrasted with the *anupratipatti* or respectful behaviour to the aged.

Similar doctrines are inculcated in an addendum to the ten moral precepts by SRONG BTSAN a religious king (*dharma rája*) of Tibet :

1. Reverence to God.—2. Exercise of true religion.—3. *Respect to the learned.*—4. *Honour to parents.*—5. Respect to the higher classes and to old persons.—6. Good-heartedness, (or sincerity) to friends and acquaintances.—7. To be useful to one's countrymen, &c.—See manuscript volume of CSOMA's Analysis of Tibetan works. The *Subha shita ratna vidhi* of SAKYA PANDITA. Also Index *Kahgur*, leaf 23, page 44.

40. *Duwehi* for द्वेहि two-fold, viz. : first आकारेहि 'in form' : the second, धर्मनियमेन न्रत्येच (*niritiya* for *nrite*, dancing) according to the pandit : but I would prefer *dwihi ákárehi* (in the Páli 3rd case plural) 'by two signs or tokens :' viz. नियमनच by voluntary practice of its observances, and secondly निर्हत्या 'by freedom from violence—security against persecution.' The Sanskrit would be द्वाभ्यां आकाराभ्यां in the dual.

41. ततश्च बहुषुधर्म नियमेन निर्हत्याएव च भूयान् धर्मनियमे चक्षुः रवावासया दर्शनता, 'as in the translation.'

by manifold other virtuous acts performed on my behalf. And that the religion may be free from the persecution of men, increasing through the absolute prohibition to put to death living beings, or to sacrifice aught that draweth breath. For such an object is all this done, that it may endure to my sons and their sons' sons—as long the sun and the moon shall last. Wherefore let them follow its injunctions and be obedient thereto—and let it be had in reverence and respect. In the twenty-seventh year of my reign have I caused this edict to be written; so saveth (DEVA'NAMPIYA) :—" Let stone pillars be prepared and let this edict of religion be engraven thereon, that it may endure unto the remotest ages."

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10 *analabhâye pânânam : sè etâye aṭhâye iyam kate : putâ papotike* 44 *chanda masuliyike* 45 *hotuti : tathâcha anupatipajantuti hevam hi, anupaṭipajantâm hi* 46, ata ladha ta *aladhahoti,* 47 *satavisati vasâbhisitenamè iyam dhammalibi likhapâpitâti, eta Devânampiya âhâ ;—" Iyam*

11. *dhammalibi ata aṭhâ silaṭhabhânivâ sila dhalakâniva tata kataviyâ ; ena esa chilaṭhiti siyâ."*48

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42. *Niyamâni* neuter for the Sanskrit masculine नियमा and so the participle.

43. अविहिंसायै भूतानां, 'by the not killing of animals,' अनालंभाय प्राणिनां, 'by the not sacrificing of living beings.' सा एतस्मै अर्थाय इयंकृता, 'so with such object is this done.'

44. पुत्रप्रपौत्रिके 'pending from sons to greatgrandsons'—from generation to generation.

45. चन्द्रसमसुरीयके, 'pending the sun's and moon's (duration), भवतु इति.

46. For *anupatipajantu*, see note 13, north inscription. The duplication अनुप्रतिपद्यन्तु इति अनुप्रतिपद्यन्तां हि, the first in the *common form*, the second *proper form* of the verb, seem intended to make the order more impressive and imperative.

47. The half effaced word cannot well be explained; the second is आराधो भवति, 'let it be reverenced', or 'let reverence be,' probably the word is repeated here as before.

48. The final sentence I did not quite understand when writing my first notice, having supposed *silathabhâni* to represent the Sanskrit *silasthâpana*. After careful reconsideration with the pandit, we recognize the Pâli as rather the exact equivalent for *silastámbha*, a stone pillar (made neuter) : the sentence may therefore thus be transcribed इयं धर्मलिपिः यत्र यत्र शिलाकाः एव शिलाधारिका एव ततः कर्तव्याः एव एव चिरस्थितिः स्यात्. The translation is given in the text. *A'dhára*, a receptacle, a stone intended to contain a record. The words *silathabhâni* and *siladhalakâni* however, being in the plural and neuter, require *kataviyani* also neuter, which may be effected by altering the next word *ena* to *âni*,—*ena* being superfluous though admissible as a duplication of *esa*.

VII.—*Abstract of a Meteorological Register kept at the Cathmandu Re-*

Observations at 10 A. M.					Obs. at 4 P. M.				Wind; weather; rain.		
Day.	Bar.	Thermometer.			Bar.	Thermometer					
	at 32°.	Air.	Wet	Diff.	at 32°.	Air.	We	Diff.	At 10 A. M.	At 4 P. M.	Rain.
Mar.1	25,539	50	43	7	25,464	56	47	9	SW. cloudy.	SW. cloudy.	
2	492	52	44	8	376	63	53	10	W. clear.	W. clear.	
3	437	54	45	9	329	61	46	15	W. ditto.	SW. cloudy.	
4	486	52	47	5	382	64	47	17	W. ditto.	W. clear.	
5	472	53	48	5	396	63	47	16	W. cloudy.	W. ditto.	
6	517	51	45	6	417	63	46	19	SW. ditto.	W. ditto.	
7	509	53	46	7	404	67	48	18	W. clear.	W. ditto.	
8	502	55	48	7	428	68	49	19	W. ditto.	W. ditto.	
9	537	54	47	7	..	..	..	..	SW. cloudy.		
10											
11											
12											
13	..	..	..	..	384	65	47	18		W. ditto.	
14	368	56	47	9	233	65	48	17	W. clear.	W. ditto.	
15	290	53	46	7	214	67	50	17	W. ditto.	W. ditto.	
16	394	55	48	7	279	69	53	16	W. ditto.	W. ditto.	
17	439	57	50	7	321	68	52	16	W. ditto.	W. ditto.	
18	469	57	50	7	338	68	52	16	W. ditto.	SW. cloudy.	
19	449	57	50	7	316	70	52	18	SW. cloudy.	W. clear.	
20	379	58	51	7	263	71	56	15	W. clear.	W. ditto.	
21	309	58	51	7	190	67	52	14	W. ditto.	NW. cloudy.	0173
22	297	55	50	5	234	69	55	14	W. ditto.	W. clear.	
23	387	58	52	6	328	69	55	14	W. ditto.	W. ditto.	
24	439	61	53	8	330	70	56	14	W. ditto.	W. ditto.	
25	409	62	54	8	308	72	57	15	W. ditto.	W. ditto.	
26	384	64	55	9	316	70	57	13	W. ditto.	W. cloudy.	
27	441	65	55	10	353	73	55	18	W. ditto.	W. clear.	
28	311	63	50	13	189	74	52	22	W. ditto.	W. ditto.	
29	231	63	51	12	132	73	49	24	W. ditto.	W. ditto.	
30	263	59	47	12	196	71	49	22	W. ditto.	W. ditto.	
31	343	58	47	11	235	69	51	18	W. ditto.	NW. ditto.	
Mean,	25,410	56.7	48.8	6.9	25,299	64.4	48	16.4			0173
Apr.1	25,376	58	48	10	25,236	69	48	21	W. clear.	W. clear.	
2	346	62	50	12	235	61	48	13	W. ditto.	NW. cloudy.	
3	390	54	49	5	274	64	54	10	W. cloudy.	NW. ditto.	0865
4	347	55	50	5	254	68	50	18	W. fog.	W. clear.	
5	356	58	56	6	232	71	54	17	W. clear.	W. ditto.	
6	302	60	52	8	229	74	52	22	W. ditto.	W. ditto.	
7	338	62	54	8	227	76	54	22	NW. ditto.	W. ditto.	
8	317	63	52	11	197	76	50	26	W. ditto.	W. ditto.	
9	350	62	50	12	246	72	53	19	SW. cloudy.	SW. cloudy.	
10	343	64	52	12	229	71	51	20	W. clear.	SW. ditto.	
11	280	61	52	9	189	74	55	19	W. ditto.	W. clear.	
12	327	62	53	11	233	75	55	20	SW. clear.	W. ditto.	
13	359	63	53	10	224	77	57	20	S. ditto.	S. calm.	
14	307	66	56	10	..	..	..	..	SW. ditto.		
15	297	67	56	11	178	80	52	28	W. ditto.	W. clear.	
16	277	66	55	11	202	78	54	24	S. calm.	W. ditto.	
17	301	67	54	13	173	75	58	17	S. ditto.	S. cloudy.	
18	217	67	56	11	..	..	..	..	S. ditto.		
19	234	68	57	11	155	76	60	16	SW. ditto.	W. calm.	
20	275	70	60	10	175	80	60	20	SW. breezy.	W. breezy.	
21	259	74	57	17	142	82	60	22	SW. calm.	W. ditto.	
22	302	70	56	14	225	81	55	26	SW. ditto.	SW. calm.	
23	409	66	51	15	325	75	52	23	SW. ditto.	SW. ditto.	
24	499	64	50	14	377	74	53	21	SW. ditto.	SW. ditto.	
25	446	62	50	12	..	..	..	..	SW. ditto.		
26	431	63	53	10	337	75	54	21	SW. ditto.	W. clear.	
27	430	65	53	12	..	..	..	..	SW. ditto.		
28	393	66	55	11	295	80	60	20	W. ditto.	SW.	
29	452	69	58	11	221	81	55	26	SW. ditto.	NW.	
30	323	71	55	16	205	80	54	26	SW. ditto.	W.	
Mean,	25,346	64	53	11	25,231	74	54	20			0865

sidency for 1837. *By* A. CAMPBELL, *Esq. M. D. Nipal Residency.*

Observations at 10 A. M.					Obs. at 4 P. M.				Wind ; weather ; rain.		
Day.	Bar. at 32°.	Thermometer Air.	Wet	Diff.	Bar. at 32°.	Thermometer. Air.	Wet	Diff.	At 10 A. M.	At 4 P. M.	Rain.
May1	25,359	71	54	17	25,317	72	55	17	SW. clear.	NW. cloudy.	
2	369	66	52	14	279	78	56	22	SW. ditto.	NW. clear.	
3	404	65	54	11	317	68	56	12	W. cloudy.	W. ditto.	0173
4	454	55	50	5	323	56	50	6	N. W. rain.	NW. rainy.	519
5	377	56	50	6	210	64	54	10	N. W. ditto.	W. clear.	519
6	365	60	54	6	297	71	55	19	W. clear.	W. fine.	
7	419	66	56	10	331	76	60	16	W. ditto.	W. ditto.	
8	391	70	58	12	233	79	56	23	NW. ditto.	W. ditto.	043
9	354	68	57	11	260	77	58	19	W. fine.	W. ditto.	173
10	382	65	57	8	289	75	57	18	SW. clear.	W. ditto.	
11	370	65	56	9	250	77	56	21	NW. ditto.	SW. cloudy.	
12	347	66	54	12	253	76	55	21	NE. ditto.	NW. ditto.	
13	283	70	55	15	182	78	56	22	NE. ditto.	W. ditto.	
14	281	71	58	13	199	79	60	19	NE. ditto.	W. hazy.	
15	279	72	58	14	199	81	60	21	NE. ditto.	W. ditto.	
16	287	72	58	14	205	82	58	24	NE. ditto.	W. ditto.	
17											
18											
19											
20											
21	233	75	58	17	123	82	62	20	NE. clear.	W. cloudy.	
22	250	73	60	13	164	83	62	21	E. cloudy.	NW. ditto.	
23	267	75	62	13	168	84	64	20	NE. clear.	W. ditto.	
24	285	71	60	11	185	82	62	20	NE. ditto.	W. clear.	
25	306	74	61	13	219	80	64	18	SE. cloudy.	W. cloudy.	
26	337	76	63	13	249	82	66	16	NE. clear.	SW. ditto.	
27	290	73	65	8	273	83	65	18	NE. ditto.	W. ditto.	596
28	221	76	68	8	140	84	66	18	E. ditto.	W. clear.	
29	180	78	68	10	093	87	65	22	NE. ditto.	W. ditto.	
30	139	79	68	11	082	88	65	23	NE. ditto.	W. ditto.	
31	179	80	65	15	117	87	66	21	NE. ditto.	W. cloudy.	
Mean.	25,319	69	58	11	25,217	78	59	19			2023
June1	25,166	77	64	13	25,093	86	64	22	W. clear,	W. clear.	
2	122	77	60	17	029	82	64	18	NE. ditto.	W. ditto.	
3	139	75	56	19	097	85	57	28	N. ditto.	W. ditto.	
4	246	74	57	17	168	84	58	26	W. ditto.	W. ditto.	
5	307	75	60	15	231	85	58	27	NE. ditto.	W. ditto.	
6	287	76	56	20	195	85	57	28	NE. hazy.	W. hazy.	
7	242	77	57	20	195	86	60	26	E. ditto.	W. ditto.	
8	330	77	62	15	225	82	65	17	E. ditto.	SW. cloudy.	
9	349	75	61	14	224	83	62	21	W. clear.	W. clear.	
10	288	74	65	9	207	82	62	20	NE. cloudy.	NW. ditto.	0346
11	265	76	61	15	194	84	61	23	NW. clear.	W. ditto.	
12	250	77	62	15	173	86	61	25	NW. ditto.	W. ditto.	
13	276	77	62	15	173	87	62	25	NE. ditto.	W. ditto.	
14	209	79	61	18	135	87	61	26	NW. ditto.	W. ditto.	
15	176	77	60	17	098	88	61	27	NW. ditto.	W. ditto.	
16	153	81	60	21	062	89	63	26	NW. ditto.	W. ditto.	
17											
18											
19											
20	The	first	fall	of	rain at	1 P.	M.		wind at W. thun	der.	
21	25,371	75	66	9	25,280	78	70	8	E. cloudy.	SE. cloudy.	580
22	362	73	66	7	256	78	70	8	SE. ditto.	E. ditto.	436
23	262	74	65	9	235	75	67	8	SE. ditto.	SE. rain.	173
24	232	74	67	7	147	76	67	9	SE. ditto.	NW. cloudy.	173
25	159	74	66	8	112	78	70	8	NW. ditto.	W. ditto.	1547
26	142	74	70	4	094	77	71	6	E. ditto.	E. ditto.	
27	166	74	67	7	082	78	70	8	E. ditto.	SW. ditto.	510
28	118	74	69	5	054	77	69	8	E. ditto.	W. ditto.	376
29	150	74	69	5	074	77	70	7	SE. ditto.	SW. ditto.	1557
30	178	73	67	6	082	78	71	7	NE. ditto.	W. ditto.	856
Mean,	25,228	75.5	63.3	12.3	25,150	71.2	64.3	16.9,			6563

March.—'Clear' means a cloudless sky not a clear atmosphere During the greater part of this month there has been a thick haze from 11 A. M. till sunset. In ordinary seasons this does not commence before the month of May, but this year we have not our usual frequent spring showers.

April.—The Barometrical range between 10 and 4 is .115. The Thermometrical range 10°. Mean depression of wet bulb, 15.5.

This is a most unusually dry reason. The frequent spring showers peculiar to this climate have been altogether wanting this season. A heavy haze 25 days out of the 30.

May.—The hottest, and driest month of May within the recollection of the oldest inhabitants. The observations made in the northern end of a western open verandah: mean barometrical range for the day, 98; do. thermometrical 9°; average depression of wet bulb 15°.

June.—From the 1st to the 20th the weather was hotter and drier than has ever before been recollected in Cathmandu. Mean temperature from 1st to 16th 77° at 10 A. M.; do. do. at 4 P. M. 85°. Mean temp. from 21st to 30th at 10 A. M. 73°; do. do. at 4 P. M. 77°.

VIII.—*Proceedings of the Asiatic Society.*

Wednesday Evening, 2nd August, 1837.

The Rev. W. H. MILL, D. D., Vice-President, in the chair.

RUSTOMJEE COWASJEE, Esq., Baboo SUTTCHURN GHOSAL, and Captain BOGLE, were elected members of the Society.

Dr. G. G. SPILSBURY and Major J. R. OUSELEY were proposed by the Secretary, seconded by Mr. CRACROFT.

Dr. G. MCPHERSON, *Berhampore,* proposed by Capt. PEMBERTON, seconded by Col. MACLEOD.

Letters from Messrs J. MUIR and G. W. BACON, acknowledged their election.

Letter from the Royal Societies of London and Edinburgh, and from the Society of Arts, acknowledged receipt of the 20th vol. of Asiatic Researches.

The Secretary read correspondence with Government pursuant to the resolution of last meeting regarding the museum.

To H. T. PRINSEP, Esq.
Secretary to Government, General Department.

SIR,

I am directed by the Asiatic Society to acknowledge the receipt of your letter, dated the 28th ultimo, to the address of their President conveying the reply of the Right Honorable the Governor General of India in Council to the Society's representation on the subject of their museum of antiquities and natural history.

The Society feel that they have every reason to be highly flattered with the condescension and consideration extended to their address by the members of government; and although a reference to the Honorable the Court of Directors has been deemed indispensable before finally determining on the adoption of the Society's proposition for the formation of a national museum at the cost of the state, still they entertain the most sanguine assurance of a favorable issue under the encouragement and recommendation with which His Lordship in Council has been pleased to promise that the reference home shall be accompanied.

On the strength of this confident expectation a very full meeting of the Society held, on the 5th instant, came to the resolution that it would be unadvisable at such a juncture to break up the establishment, and abandon the incipient museum upon which they had for two years devoted so considerable a portion of their income, and thus perhaps have to recommence their collections a year hence, should the Honorable Court acquiesce in the proposed measure.

It was consequently resolved that a second respectful application should be submitted to the Right Honorable the Governor General in Council in immediate connection with their former address to inquire:—

Whether, in order to maintain the Society's Museum in its present state of efficiency, pending the reference on the subject of its extension and conversion into a

public institution, the government would be disposed to sanction a monthly grant of 200 Rupees, the actual sum which is now obliged to be withdrawn from this object, on account of other calls on the Society's funds.

And secondly, whether (in order to avoid unnecessary loss of time) the Government would entrust the Society with a certain sum, say not exceeding 800 Rupees per mensem, to be expended in the accumulation of antiquities, manuscripts, and objects of natural history and science; on the condition that, in the event of the Honorable Court's declining their sanction to the Society's proposal, the whole of the objects thus collected shall be placed at the disposal of Government in acquittance of the money advanced.

I have the honor accordingly to request that you will be pleased to obtain the sentiments of His Lordship in Council on these modifications of the original proposition to which it is hoped there will be the less objection, because it is known that the Honorable Court has an extensive and valuable museum and library to which such an accession cannot but prove acceptable.

I have the honor to be, &c.

Asiatic Society's Apartments,
Calcutta, 10th July, 1837.

(Signed) JAMES PRINSEP,
Secy. Asiatic Society.

To JAMES PRINSEP, Esq.

Secretary to the Asiatic Society.

SIR,

I am directed to acknowledge the receipt of your letter dated the 10th instant, submitting further propositions connected with the condition of the funds of the Society and its resort to Government for aid in maintaining the museum of antiquities and natural history already commenced, and in reply to state that the Right Honorable the Governor General of India in Council sanctions, pending the reference on the subject intended to be made to the Honorable the Court of Directors, the payment of 200 rupees per mensem for the establishment and expences necessary to keep up the existing museum and library of the Asiatic Society. Orders will accordingly be issued for the payment of this amount monthly from the 1st proximo to the receipt of the Secretary of the Asiatic Society.

2. With respect to the further request urged on the part of the Society, viz. that the Governor General of India in Council will allow the sum of 800 rupees per mensem to be held applicable to the purchase of objects of curiosity or antiquarian interest, the Society being under obligation to account for the expenditure of the money, and to deliver the articles provided for transfer to the Honorable Court's museum in London if so ordered. His lordship in Council feels compelled to decline to make any specific appropriation of funds to such objects on the terms stated, but he will be ready to receive from the Society recommendations for the purchase or other procurement of objects of more than common interest of which the Society may receive information, and for the obtainment of which it may want the necessary funds.

3. His Lordship in Council desires it to be understood however that the objects for which the aid of Government funds may be solicited, ought not to be of a perishable nature—the utility of collecting such in a climate like that of Bengal being in the opinion of his Lordship in Council very doubtful.

I am, &c.

Council Chamber,
26th July, 1837.

H. T. PRINSEP,
Secy. to Govt.

A member inquired what the Committee of Papers proposed doing with the government grant, the Secretary explained that as the money had been asked for a specific object, he concluded it would be at once devoted to the payment of the museum contingent. The Curator was, it is true, about to quit *Calcutta*, but as that officer's resignation was not yet before the meeting, he should defer making any motion with regard to the disposal of the grant (the acceptance of which he confessed went exceedingly against his own feelings of the diguity of the Society) until a future occasion.

Some copies of the third volume of the *Mahábhárata* just completed were laid on the table. The printer's bill for this volume (500 copies, 850 pages) amounted to Rupees 3,693 13.

Library.

COLEBROOKE'S Miscellaneous Essays, 2 vols.—*presented on the part of the late author.*

Transactions of the Royal Society of Edinburgh, Vol. XIII. Part 2nd, 1836, also Journals of Proceedings—*presented by the Society.*

Transactions of the Society of Arts, Vol. LI. Part 1,—*presented by M. Aikin for the Society.*

Memoirs of the Astronomical Society of London, Vol. IX.—*presented by the Society.*

A Companion to Johnson's Dictionary, English and Bengálí,—by J. MENDIES, 1828—*presented by the author.*

Dictionary in English, Bengálí, and Manipurí, by Captain GORDON, Political Agent at Manipur—*presented by the author through Mr. Trevelyan.*

The characters of Theophrastus, translated into Armenian, *Venice*, 1830—*presented by Joh. Avdall.*

The Quarterly Journal of Medical and Physical Society, No. III.—*by the Editors, Professors Goodeve and O'Shaughnessy.*

Meteorological Register for June, 1837—by the Serveyor General.

Lardner's Cyclopedia, Greece, vol. 4, from the booksellers.

———-———, Southey's Admirals, vol. 4.

Reponse de M. de Paravey sur l'antiquité Chinoise, a paper addressed under envelope to the President—*by the author.*

Adverting to the edition of the Miscellaneous Essays of the late Mr. H. T. COLEBROOKE announced among the presentations to the library this evening, Mr. J. T. PEARSON called to the attention of the meeting that although it was impossible now to return thanks to the illustrious author for what might be called his dying bequest to literature, the Society might justly place on record some appropriate acknowledgment of its great obligations to this eminent orientalist, and some expression of its regret at the termination of his honorable and useful career. He thought it would be an excellent plan to follow the example of the institute at Paris, in its eulogistic memoirs on the death of eminent members—such as those pronounced by the Baron CUVIER on so many occasions.

The meeting concurring in Dr. PEARSON's proposition which was seconded by Mr. HARE, and the Vice-President, Dr. MILL, having acceded to the request of the meeting to embody in their present resolution an abstract of the services rendered by Mr. COLEBROOKE to the Society, and to Asiatic literature in general,—it was accordingly

Resolved unanimously, that the Asiatic Society cannot place on its shelves this last donation from HENRY THOMAS COLEBROOKE, so long one of its most distinguished members, without recording a tribute of affection for his memory, of admiration for his great talents, and regret for the loss sustained by oriental literature through his lamented death.

"Mr. COLEBROOKE was proposed as a member of this Society in the year 1792, and his first essay "on the duties of a faithful Hindu widow" was read in the last season of Sir WILLIAM JONES' occupation of the chair, in April 1794. Though on an insulated subject only, which various circumstances however render deeply interesting, this short essay well exemplifies the manner in which he exhausts every subject of that nature that he undertakes: and is a happy prelude to that series of splendid contributions to the society, which in profundity of acquaintance with all subjects of Indian literature and science,—in the union of the most extensive erudition with the most chastened judgment, and an accurate scientific acquaintance with the several subjects which his essays collaterally embrace, are unsurpassed by those of any other contributor to our Researches,—or by any who, either before or since, have pursued the same unbeaten paths of literature.

His next essay was the "enumeration of Indian classes," or (as we commonly term them) castes—in the 5th volume of the Researches; an able and excellent elucidation of a subject of no common interest. And this, after some less important contributions, was followed by the essays on the

Religious Ceremonies of the Hindus, and on the Sanskrit and Prakrit languages, which appear in that volume and in the 7th—essays which would be of themselves sufficient to place the author in the highest rank of oriental scholars,—and which must long continue to form the best textbooks of those who wish to investigate the depths of Indian literature and religion.

The translation of one of the more recent inscriptions on the Delhi lát, which appears also in the 7th volume of the Researches, is chiefly interesting as being the commencement of the author's more extensive researches into monuments of the same kind in our later volumes: he was among the first to point out the great importance to the knowledge of ancient India of a pursuit, the enlargement of which is daily increasing our stock of historical information. The "account of certain Muhammadan sects" in the same volume contains some valuable particulars respecting the origin of the curious race so well known in the west of India under the name of *Bohras*; and proves that in the midst of his accurate study of the more secluded literature and monuments of the Hindus,—the author was versed also in the learned records of Western Asia.

The dissertation which bears, perhaps most of all, the stamp of the profound Sanskrit learning of the author, is that on the Vedas in our 8th volume; a work which, though necessarily leaving much undone that is yet required towards furnishing a complete analytical index to those records of the ruder language, and oldest worship of the Hindus,—has found none to second, much less to complete, or to supersede the masterly outline of their contents which is here presented to the inquiring student. In this, as in the other essays of Mr. COLEBROOKE,—the reader feels that it is not a mere philologist, or collector of ancient records that he is consulting,—but one whose critical sagacity weighs well the value, the age, and the import of every authority that he alleges: and whose statements in consequence, may be received with the most entire respect and confidence.

The later volumes of the Researches are adorned not only by the elaborate "Observations on the Jains" in which very respectable classical erudition is brought to aid profound Indian research,—and the learned and interesting Essay on Sanskrit and Prakrit poetry,—but by the author's articles on Hindu astronomy. To this deeply interesting subject of inquiry none has so completely brought the qualification desiderated by IDELER, the union of Sanskrit learning with competent astronomical science. The account of the Indian and Arabian divisions of the Zodiac in the 9th volume,—and the essay in the 12th on the notions of the Hindu mathematicians respecting the precession of the equinoxes and the motions of the planets,—are most valuable contributions to our knowledge on this subject. They are the best corrections to the extravagant notions of Indian antiquity which the preceding speculations of BAILLY and others had deduced from imperfect notices of the Hindu observations: and also to the crude and fanciful speculations with which a writer on the

opposite side, the late Mr. J. BENTLEY, had unhappily adulterated some very valuable and interesting calculations.

Such, with some articles of less moment, but all deserving perusal, are the contributions of Mr. COLEBROOKE to the Researches of the Society, of which he was elected Vice-President on the 5th of October, 1803, and President on the 2nd of April 1806,—an office which he continued to fill until his departure to England in 1815. But it would be unpardonable to omit all mention of the works separately published by him while resident here: particularly the Sanskrit Grammar, with its very able critical preface,—the edition of the ancient Sanskrit vocabulary, the *Amera Cosha*, to the interpretation of which much botanical knowledge is made to contribute;—the very erudite and ingenious work on the Algebra of the Hindus,—and the Digest of Hindu Law, a standing monument of the professional value of the writer, and of his skill at the same time as a jurist and an oriental scholar.

Neither would it be pardonable to omit all mention of what has been contributed by Mr. COLEBROOKE to the same cause since his return to England, where he acted zealously as the Society's agent until age and infirmities compelled him, in 1830, to relinquish the duties of the office to which they elected him. This period is signalized by the erection of the Royal Asiatic Society, to which, as their first President, Mr. COLEBROOKE delivered his inaugural discourse in March 1823, and of whose transactions his articles may be regarded as the principal ornament. Of these the essays on the Philosophy of the Hindus in its five principal divisions is unquestionably the most important, relating as they do, to a subject which none who studies the history of the human mind can regard otherwise than with the greatest interest,—and written with an ability, a mingled profundity and clearness, which challenges comparison with the best of his preceding works. A perusal of these five essays—as they were successively published in the two first volumes of the R. A. S. Transactions, or as they are now republished with the best of his earlier essays in the selection now presented to our library,—will at once convince every discerning reader of their immeasurable superiority to any thing that had been before published on the same subject."

Mr. MACNAGHTEN presented in the name of Mr. WILKINSON a second pamphlet by SOOBAJEE BAPOO in *Maratha* in reply to the Pandits of *Poona*, who have defended the Pauranic system of astronomy, in a brochure entitled *Avirodha prakása*.

A letter from Major Low, dated Province Wellesley, 7th July, proffered to the Society, a manuscript description of a political mission to the Siamese in lower *Siam*, provided that it could be published *complete with the six drawings attached*. Referred to the Committee of Papers.

Literary.

Mr. WATHEN invited the Society's notice to a prospectus first made pub-

lic in the *Bombay Courier* some months back, for taking accurate drawings of the remains in the *Adjunta Caves*, and publishing them by subscription.

Resolved, that the Society subscribe for two copies and circulate the notice among its members. [See cover of the present number.]

Read a letter from Mr. Secretary MACNAGHTEN forwarding a manuscript grammar of the *Belochee* language, by Lieut. LEECH of the *Bombay* Engineers.

Extract of a letter from the Hon'ble G. TURNOUR of Ceylon was read: stating that he had found by means of the new key, that the Delhi Lát inscription related to the *Dulada* relic or sacred tooth of BUDDHO in Ceylon.

Lieut. SIDDONS presented a continuation of his translation of the *Dadupanthí Grantha*, the chapter on meditation.

Lieut. E. CONOLLY forwarded an account of a visit to the ruins of *Oujein*, with notice of various coins and antiquities found there: accompanied with sketches by Lieut. KEWNEY, including two of the great meteor observed on the 11th January last in central India.

Lieut. KITTOE announced the safe arrival of the *Bhubaneswar* inscription-slabs, which he was about to return to their respective temples.

Physical.

Mr. B. H. HODGSON communicated to the Society copies of correspondence regarding the publication of his work on the Zoology of *Nipal*, and of the arrangements he had effected, requesting that the Society would add such suggestions as to them might appear desirable.

Resolved, that the Society forward the papers (as requested) to Sir A. JOHNSTON, stating their concurrence in Mr. HODGSON's views as to the mode and scale of publication, and urging such support for the work as the home Society should be able to afford among its members as well as through its influence with the Honorable Court.

Mr. HODGSON has obtained the valuable aid of Sir WM. JARDINE to superintend the publication of the plates, which it is proposed to execute in lithography on an economical scale, so as to make the work a text-book for Indian naturalists rather than a costly ornament to the drawing room of the rich as intended by Mr. GOULD, who estimated the expence of such an edition at a lakh of rupees! The descriptive portion Mr. HODGSON judiciously defers publishing until his return to Europe, and it will be presented in a convenient octavo form separate from the plates.

A generic and specific account of the *Gauri Gau* (whose head was lately exhibited by Mr. EVANS to the Society) was also received from Mr. HODGSON.

Journal of a trip to the *Boorenda* pass in the *Kanáwer* district of the *Himálaya*, by Lieut. THOMAS HUTTON, was communicated by Dr. PEARSON.

[This paper from its length we fear we shall be obliged to publish piece-meal; it contains much that interests the naturalist.]

A Boa Constrictor presented by Mr. R. GWATKIN, stuffed in the museum.

A long-tailed thrush, presented by Dr. L. BURLINL

A crab, set up, varnished, and presented by M. DELESSERT, who in his parting note tendered his services to procure objects of interest to the Society at *Pondicherry*, whither he was now proceeding.

IX.—*Miscellaneous.*

1.—*Proportion of rain for different lunar periods at Kandy, Island of Ceylon.*

[Extract of a letter from Capt. W. R. ORD.]

As regards this Island it may be gratifying to others to learn that through the kindness and encouragement of Major General SIR JOHN WILSON, commanding the forces, I have been enabled to commence a continuous series of two-hourly registrations of the thermometer, and an hourly one once a week at this station, on the principle recommended by the British Association in the 1st vol. of their report, speaking of Devonport; and a friend in Colombo has kindly assured me he will take charge of a similar operation at that place. Thus I am induced to hope that this key of Southern India may yet bear its share in the promotion of science, so fine an example of which the Peninsula is spreading before us.

The highly interesting explanation of the cause of the different quantities of rain falling from different heights above the ground given in the Asiatic Journal No. 37, led me to calculate what the augmentation of one drop might be through the respective falls, and which appears to be as follows; namely,—

In 1000th parts of its own diameter, a drop of rain falling to the earth at York, gains, from an elevation of

		During the warmer months.	During the year.	During the colder months.
43½ feet..	..	42	56	78
	of its own dia. about	$\frac{1}{23}$	$\frac{1}{18}$	$\frac{1}{13}$
213 ..	..	114	148	202
	..	$\frac{1}{5}$	$\frac{1}{7}$	$\frac{1}{4}$

In order to attempt a similar experiment, with the permission of His Excellency the Governor I have established a pluviameter and evaporator on the top of the Pavilion here, at a height of about 75 feet above those at my own house, and also one on a hill about 350 feet above the latter; from which, when it is considered that our climate is a perpetual summer, and our average annual fall of rain nearly 80 inches, I think the result may be worthy of notice.

For those who are interesting themselves in this subject I take the liberty of adding the following remarks made through a succession of 32 lunations on the fall of rain from January 1834 to July 1836; within five days before the day of the new moon, or in

	fall in inches.		comparative fall.
176 days before new moon, ..	53·325	or as	.. 100.0
,, after new moon, ..	43·875	to	.. 82·3
,, intermediate, ..	26·766	,,	.. 50·2
,, before full moon, ..	33·405	,,	.. 62·6
,, after full moon, ..	28· 07	,,	.. 52·6
,, intermediate, ..	38· 25	,,	.. 71·7

The 176 intermediate are calculated from the actual fall in the 121 and 120 days intervening.

From such statements aberrating rules might perhaps be drawn; but it would appear that allowance ought to be made for extraordinary falls which arise from circumstances with which we have little acquaintance, and which, as they cannot be introduced into general formulæ make all our calculations more or less erroneous.

2.—Memorandum of the fall of the Barometer at Macao during the severe Hurricane, on the 5th and 6th August, 1835.

[Communicated by Capt. HENNING.]

Day and hour.	Barom.	Day and hour.	Barom.	Day and hour.	Barom.
5th 1 00 P. M.	29.47	6th 0 30 A. M.	28.40	6th 4 10	28.90
2 30	29.28	0 45	28.30	4 54	28.97
5 00	29.20	1 20	28.05	5 15	29.02
7 20	29.12	1 25	28.08	6 00	29.08
9 00	29.08	1 45	28.20	6 45	29.12
10 20	28.95	1 55	28.30	7 45	29.20
10 45	28.90	2 00	28.37	8 15	29.21
11 05	28.85	2 25	28.56	8 45	29.23
11 30	28.75	2 45	28.68	9 30	29.27
11 55	28.65	3 10	28.75	10 25	29.30
0 15	28.50	3 40	28.83	11 00	29.34

At 2 P. M. the barometer had risen to 29.42 and it continued to rise to 29.65, at which point it usually stands during fine weather. The Hurricane commenced on the evening of the 5th after three or four days very hot weather. Its greatest violence was on the morning of the 6th about 2 o'clock.

3.—The Geological Society of London.

On Friday Feb. 17, 1837, the anniversay of this Society was held in Somerset House. The president, Mr. Lyell, communicated to the meeting, that the council had awarded two Wollaston medals; one to Captain Cautley, of the Bengal artillery, and the other to Dr. Hugh Falconer, of the Bengal Medical Service for their geological researches and discoveries in fossil zoology, in the Sewalik or Sub-Himálayan range of mountains. On presenting the medals to Dr. Royle to transmit to his friends in India, the president expressed his conviction, how gratifying it must be to him to be the medium of communicating to Captain Cautley and Dr. Falconer the high sense entertained of their services to science by the Geological Society of London, who award these medals as a token of the sympathy they feel for those so zealously labouring in a distant land for the promotion of a common cause. The president further stated, that in his address he would treat more fully of the extent of their labours, and bear testimony to the zeal and industry with which these gentlemen had investigated the structure of the range extending along the southern base of the Himálayan mountains, between the Ganges and Sutlege rivers, as well as to the talent they had displayed in unravelling the anatomical peculiarities of the extinct genus *Sivatherium*, and of new species of other genera; and concluded by requesting, that in forwarding these medals, the first sent by the Geological Society to India, that Captain Cautley and Dr. Falconer should be assured of the unabated interest which the Society take in their researches, together with ardent hopes for their future welfare and success. Dr. Royle, in reply, said, he did feel high gratification at being made the medium of transmitting to India the distinguished honours conferred by the Geological Society on his friends, Captain Cautley and Dr. Falconer; as he could himself bear testimony to the zeal which animated those gentlemen in the prosecution of geological researches. Having had opened to their investigation one of the most extensive deposits of fossil remains, and being without books, without museum, or the aid of skilful naturalists, they had, undeterred by difficulties, proceeded to the examination of extinct forms, by making a museum of the skeletons of the animals existing in the forests, the rivers, and the mountains, of northern India. By these means they had come to decisions which had been approved of by anatomists, both of London and Paris. He expressed, also, his assurance, that the approbation of the Geological Society would not only stimulate them to fresh exertions, but excite others to follow their example.—*Literary Gazette, Feb. 25.*

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of July, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.			Observations at 4 P. M.							Calculated Humidity.			Register Thermometer extremes.		Rain.		Wind.		Weather.	
	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Old Stand. Barometer at 32°.	New Stand. Barometer.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Cold on roof.	Heat in sun's rays on roof.	On the ground.	At elevation 45 feet.	10 A. M.	4 P. M.	Morning.	Evening.
1	29,546	,503	84,7	1,3	3,7	80,2	94	84	87	85	29,422	,337	88,5	4,4	5,3	77,0	[illegible]	79	78	69	79,4				S. E.	N. E.	cloudy.	threatening.
2	,480	,442	86,7	4,2	6,4	77,0	89	74	76	73	,4[illegible]	,3[illegible]	[illegible]	2,5	3,8		84	84	82		79,2				N. E.	s.	fine.	hard rain.
3	,442	,398	86,1	0,9	3,4	79,7	95	85	89	82	,3[illegible]	,3[illegible]	[illegible]	5,5	7,3			71	68		80,2		0,61	0,60	N. E.	se.	cloudy.	cum. str.
4	,568	,523	83,8	1,0	4,0	78,2	95	89	89	83	,4[illegible]	,4[illegible]	[illegible]	2,2	4,0	78,0		87	86	80	79,5		0,13	0,11	E.	se.	rain.	rain.
5	,569	,528	83,5	0,7	3,1	76,6	96	85	91	81	,4[illegible]	,4[illegible]	[illegible]	2,7	4,1	77,5		83	82	71	79,0		0,32	0,27	w.	w.	cloudy.	cloudy.
6	,536	,493	83,3	0,6	3,4		96	85	91		,4[illegible]	,3[illegible]	[illegible]	1,9	3,7	77,7		85	87	76	80,0		1,64	1,61	sw.	sw.	do	showery.
7	,492	,454	85,1	0,8	3,7	79,0	95	84	89	83	,414	,375	85,	1,5	3,4	78,8		85	87	80	80,0		0,68	0,08	sw.	w.	overcast.	cloudy.
8	,434	,416	85,5	0,8	3,0	78,0	96	84	91	83	,3[illegible]	,3[illegible]	[illegible]	1,5	2,9	78,0		90	93	85	81,0		0,12	0,08	sw.	S. E.	cloudy.	haze.
9	,450	,425	83,5	1,0	4,0	76,5	95	82	89	79	,351	,317	[illegible]	3,0	5,1	77,1		80	80	75	80,0				S.	S. E.	showery.	do
10	,427	,388	86,2	2,8	5,7	75,3	89	76	76	70	,3[illegible]	,329	[illegible]		2,6			90	93		78,0		1,30	1,24	S. W.	sw.	do	hard rain.
11	,400	,383	83,8	1,3	3,6	78,5	95	84	89	83			[illegible]	1,3	3,6			84	89		75,4				S. W.	sw.	do	
12	,346	,382	86,8	2,6	6,1	76,8	89	75	76	72	,328	,289	[illegible]	2,1	6,0	80,0		70	74	73	79,0					sw.	sw.	do	cloudy.
13	,406	,406	88,7	2,7	8,7	75,4	85	66	68	65	,416	,373	[illegible]	2,2	8,6	78,1		68	66	64	81,2					sw.	fine.	do
14	,508	,565	87,7	3,1	6,1	77,6	90	75	78	71	,575	,535	[illegible]	4,3	6,1	77,0		75	74	71	80,0					sw.	sw.	hazy.	do
15	,707	,652	89,6	3,9	7,3	76,5	88	71	74	66	,617	,580	[illegible]	3,9	7,3	77,7		83	89	76	79,0					sw.	se.	cir. stra.	showery.
16	,512	,500	96,3	1,8	4,8		92	80	82		,470	,426	[illegible]	2,7	6,8			72	76		78,2					se.	S.	cloudy.	haze.
17	,502	,482	86,5	1,9	6,1		91	75	80		,447	,401	[illegible]		4,6			80	84		78,0					sw.		fine.	threatening.
18	,592	,562	86,1	1,4	5,7	77,4	91	76	80	75	,547	,510	[illegible]	0,6	3,9	80,0		83	84	88	78,0		1,54	1,53	sw.	S.	cloudy.	cloudy.
19	,652	,623	83,1	0,0	2,2		97	90	93												77,0		0,48	0,45	sw.		showery.	do
20											,4[illegible]	,455	[illegible]		2,0			90	89		74,3					o.		rain.
21											,488	,441	[illegible]	3,3	4,0	78,0		82	84	80	76,7		0,78	0,77		o.		cloudy.
22	,575	,546	83,5	0,0	1,0	78,5	96	95	91	86	,497	,462	[illegible]	1,1	3,5	77,8		85	87	79	78,9		0,10	0,10	sw.	se.	rain.	haze.
23	,494	,567	82,6	0,1	4,5	78,3	92	80	82	86	,512	,473	[illegible]	5,0	4,2	77,0		82	80	77	77,8					sw.	o.	fair.	overcast.
24	,537	,499	85,3	2,6	0,0	78,0	91		80	80	,425	,387	[illegible]	2,7	3,3	77,5		85	89	71	76,7		0,40	0,39	sw.	w.	cir. cum.	hard rain.
25	,483	,447	84,9	1,7	4,1	77,3	94	82	87	78	,352	,315	87,5	3,3	5,4	77,2		77	80	72	77,1		0,03	0,04	N. E.	N. E.	hazy.	cloudy.
26	,372	,337	84,0	1,5	3,3	77,4	95	85	89	81	,270	,240	85,4	1,3	2,0	77,7		91	89	74	77,0		0,46	0,43	N. E.	N. E.	drizzle	showery.
27	,390	,360	81,8			78,0	95		89	88	,354	,307	85,0	1,7	4,3	77,6		81	82	79	76,5		0,62	0,46	N. E.	SSE.	cloudy.	cloudy.
28	,502	,465	82,7	0,4	3,2	77,6	96	85	91	84	,434	,395	84,0	2,3	3,0	76,2		87	87	75	75,6				S. E.	se.	do	do
29	,572	,535	85,3	3,7	6,5	75,5	88	72	74	72	,471	,436	84,0	2,2	3,7			84	82		78,5		0,64	0,63	sw.	sw.	overcast.	haze.
30	,544	,504	83,7	1,7	2,0	79,8	97	90	93	88	,448	,409	82,5		3,0	76,0		95	89	82	75,5		0,74	0,71	S. E.	n.	cloudy.	hard rain.
31	,500	,472	80,3	0,3	1,7		98	92	95		,398	,362	86,3	2,9	4,6	77,0		80	84	75	76,0		0,90	0,88	se.	se.	rain.	haze.
Mean,	29,516	,483	84,6	1,7	4,3	77,6	93	81	84	79	29,435	,398	86,2	2,4	4,2	77,6		82	83	76	77,9		11,49	10,38	One slight gale		Moderate rainy.	

I have left the column of wet bulb depression as it stands to shew the effect of earthy salts on the muslin cover; although always wet, the aqueous evaporation was retarded by this circumstance and the indications vitiated. The calculations of aqueous tension are consequently made from the Leslie differential instrument which had a new linen rag.—J. P.

JOURNAL

OF

THE ASIATIC SOCIETY.

No. 68.—August, 1837.

I.—*History of the Gurha Mundala Rájas. By Captain* W. H. Sleeman, *Commissioner for the suppression of Thuggee in the Nerbudda Provinces.*

The dominions of the *Gurha Mundala* or sovereigns extended before the death of Sungrám Sa', in the year A. D. 1530, over fifty-two districts, containing each from three hundred and fifty to seven hundred and fifty villages, and collectively, no less than thirty-two thousand two hundred and eighty, as exhibited in the annexed geographical table. But the greater part of these districts were added to their dominions by the conquests of that prince, and their previous history I shall not here attempt to trace.

These princes trace back their origin in the person of Jadoo Rae to the year *Samvat*, 415, or A. D. 358, when by the death of his father-in-law, the Gond rája Nagdeo, he succeeded to the throne of *Gurha*. *Mundala* was added to their dominion by Gopa'l Sa', the tenth in descent from that prince, about the year A. D. 634 in the conquest of the district of *Marroogurh* from the Gond chiefs, who had succeeded to the ancient *Haihaibunsi* sovereigns of *Rutunpore* and *Lahnjee*. That this ancient family of Rajpoots, who still reign at these places, reigned over *Mundala* up to the year A. D. 144 or *Samvat*, 201, was ascertained from an inscription in copper dug up during the reign of Niza'm Sa' (which began A. D. 1749) in the village of *Dearee* in the vicinity of that place. This inscription was in Sanskrit upon a copper plate of about two feet square, and purported to convey, as a free religious gift from a sovereign of the *Haihaibunsi* family, the village of *Dearee* in which it was found, to Deodatt a brahman, and his heirs for ever. Niza'm Sa' was very anxious to restore the village to one of the descendants of this man, but no trace whatever could be found of his family. The plate was

preserved in the palace with the greatest care up to the year 1780, when it was lost in the pillage of the place by the Saugor troops, and all search for it has since proved fruitless. There are, however, several highly respectable men still living who often saw it, and have a perfectly distinct recollection of its contents. How and when the Gonds succeeded this family in the sovereignty of *Mundala* we are never likely to learn; nor would it be very useful to inquire.

This family of *Haihaibunsis* reigned over *Lahnjee*, formerly called *Chumpanuttu; Rutunpore*, formerly called *Monepore; Mundala*, formerly called *Muhikmuttee, (Mahikmati,)* and *Sumbulpore, (Sambhalpur.)*

The *Gurha Mundala* dynasty boast a Rajpoot origin, though they are not recognized to be genuine. Tradition says a soldier of fortune from *Kandiesh*, Jadoo Rae* entered the service of one of the *Haihaibunsi* sovereigns of *Lahnjee*, and accompanied him on a pilgrimage to the source of the *Nerbudda* at *Amurkuntuk*. One night while standing sentry over the prince's tent he saw three Gonds, two men and a woman, pass, followed by a large monkey of the sacred or Hunooman tribe; and as they passed the monkey looked in his face and dropped some peacock's feathers, which he took up and brought home with him when relieved from his post. On falling asleep the goddess *Nerbudda (Narmada)* appeared to him, and told him that the people he had seen were not, as he supposed Gonds, but the god Rám, his consort Sitá, and his brother Luchmun; that the Hunooman was the faithful follower of the god, and the feathers he had dropped were to signify, that he should one day attain to sovereign power. He was at the same time told to visit Scrbhee Partuk, a brahman recluse, who lived at *Ramnugur*, near *Tilwara ghat* in the vicinity of *Gurha*, and consult with him on all occasions of difficulty, as his spiritual guide.

Immediately after this vision, Jadoo Rae quitted the service of the *Lahnjee* prince, and proceeded to the brahman recluse at *Ramnugur*; but on entering upon an explanation of his motive for visiting him, was very much surprised to hear him say, that he was perfectly well acquainted with his motive, as the goddess had appeared to him also and informed him of his great destiny. He then took him into the middle of the river *Nerbudda*, and there made him swear by the sacred stream, that if he ever attained sovereignty he would appoint him to the office of prime minister. This being done he recommended Jadoo Rae to proceed, and offer his services to the Gond *rája*

* Jadoo Rae (Jadu Ra'ya) the son of Jud Sing patel of the village of *Sehlgow* about 20 coss the other side of the *Godaweree* river some say.

of *Gurha*, and to use every effort to recommend himself to his notice and gain esteem.

This rája had only one child, a daughter named RUTNABULEE, (RATNAVALI';) and finding himself declining and without the hope of a son, he consulted his chief officers and priests on the choice of a son-in-law, and successor to the throne. He was recommended to leave the choice with God; and to ascertain his will it was suggested, that he should assemble as great a multitude as he could on the bank of the river, and in the midst release a blue jay*. Should the bird alight on the head of any man present, he might be assured that he had been chosen by Heaven to succeed him. The suggestion pleased the prince, and he immediately put the plan into execution. The bird was released by him on the day appointed, in the midst of an immense concourse of people; and it alighted on the head of the young adventurer, who, having some scruples of conscience on the ground of the young princess' inferiority of caste, was reconciled to the marriage by his spiritual guide. Those who wish the descendants to be considered pure Rajpoots declare that he never cohabited with this princess; and that his son by a former wife succeeded him in the government; but indifferent people believe, that he had no other wife, and that his son by her was his successor on the throne of the Gond rája of *Gurha*. This rája died in the year *Samvat*, 415, A. D. 358, and was succeeded by his son-in-law JADOO RAE.

However absurd we may consider the popular belief in the vision, there is nothing at all improbable in the story of the bird, which was likely enough to have been trained up for the purpose by the young adventurer himself and his spiritual guide, who could have found little difficulty in persuading a weak and superstitious old prince to have recourse to such a means of learning the will of heaven with regard to the important choice of a husband for his daughter, and a successor to his throne. The princes of this house are all considered to have Rajpoot blood in them; and some of the most needy of their subjects of that proud caste, condescended to allow their daughters to marry the reigning princes, though very rarely a member of one of the collateral branches of that family.

When JADOO RAE succeeded his father-in-law on the throne he appointed, agreeably to his promise, SURBHEE PARTUK as his prime minister, and we have some good grounds to believe, what is altogether singular in the history of mankind, that the descendants of the

* The blue jay is held sacred by the Hindus, as an embodied emanation from the god SIVA or MAHA'DEO.

one reigned as sovereigns of the country for a period of fourteen hundred years up to the Saugor conquest in *Samvat* 1838, or A. D. 1781; and that the descendants of the other held the office and discharged the duties of chief ministers for the same period. Among the sovereigns during this time, there are said to have been fifty generations, and sixty-two successions to the throne; and among the ministers only forty generations. This would give to each reign something less than twenty-three years. In 1260 years France had only sixty-three kings; or one every twenty years*.

I shall here give a list of the sovereigns with the number of years each is said to have reigned†. This list as far as the reign of Prem Narain, the 53rd of this line, is found engraven in Sanskrit upon a stone in a temple built by the son and successor of that prince at *Ramnugur* near *Mundala*. It is said to have been extracted from records to which the compiler, Jygobind Bajpae, had access; and good grounds to rely on the authenticity of this record for above a thousand years may be found in the inscriptions on the different temples built by the several princes of this house, bearing dates which correspond with it; and in the collateral history of the Mahommedans and others who invaded these territories during their reign. The inscription on the stone runs thus "Friday the 29th of Jet, in the year *Samvat*, 1724, (A. D. 1667.) the prince Hirdee Sa' reigning, the following is written by Suda Seo, at the dictation of Jygobind Bajpae, and engraved by Singh Sa', Dya Ram, and Bhagi Rutee."

As an instance which collateral history furnishes in proof of the authenticity of this record, it may be stated, that Ferishta places the invasion of *Gurha* by Asuf in the year *Hidgeree*, 972, or A. D. 1564; and states, that the young prince, Beer Narain, had then attained his eighteenth year. The inscription on the stone would place the death of Dulput Sa', his father, in *Samvat* 1605, or A. D. 1548, as it gives 1190 years to the forty-nine reigns, and the first reign commenced in 415. The young prince is stated to have reigned fifteen years; and tradition represents him as three years of age at his father's death. This would make him 18 precisely, and add to 1548, would place the invasion 1563, A. D.

* In one hundred and sixty years Rome had no less than seventy Cæsars. In two hundred and fifty years the Mamelukes had in Egypt forty-seven sovereigns; and a reign terminated only with a life. The Goths had in Spain in three hundred years thirty-two kings.

† We have not altered the system of orthography followed by the author, although at variance with Sir W. Jones' scheme, because there are some names for which we should be at a loss to find the classical equivalents.—Ed.

		Years.
1	Jadoo Rae, An. *Sam.* 415, reigned,	5
2	Madhoo Singh, his son,	33
3	Jugurnáth, ditto,	25
4	Ragonáth, ditto,	64
5	Roder Deo, ditto,	28
6	Behaiee Singh, ditto,	31
7	Nursing Deo, ditto,	33
8	Sooruj Bhan, ditto,	29
9	Bás Deo, ditto,	18
10	Gopál Sa, ditto,	21
11	Bhopal Sa ditto,	10
12	Gopeenáth, ditto,	37
13	Rámchund, ditto,	13
14	Soortan Singh, ditto,	29
15	Hureehur Deo, ditto,	17
16	Kishun Deo, ditto,	14
17	Jugut Sing, ditto,	9
18	Muha Sing, ditto,	23
19	Doorjun Mul, ditto,	19
20	Jeskurun, ditto,	36
21	Pertapadit, ditto,	24
22	Juschund, ditto,	14
23	Munohur Singh, ditto,	29
24	Gobind Singh, ditto,	25
25	Ramchund, ditto,	21
26	Kurun*, ditto,	16
27	Rutun Seyn, ditto,	21
28	Kumul Nyne, ditto,	30
29	Beer Singh, ditto,	7
30	Nurhur Deo, ditto,	26
31	Troo Bobun Rae, ditto,	28
32	Prethee Rae, ditto,	21
33	Bhartea Chund, his son, reigned,	22
34	Mudun Singh, ditto,	20
35	Okur Seyn, ditto,	36
36	Ram Subee, ditto,	24
37	Tarachund, ditto,	34
38	Odee Singh, ditto,	15
39	Bhun Mitter, ditto,	16
40	Bhowany Das, ditto,	12
41	Seo Singh, ditto,	26
42	Hurnaraen, ditto,	6
43	Subul Singh, ditto,	29
44	Raj Sing, ditto,	31
45	Dadee Rae, ditto,	37
46	Goruk Das†, ditto,	26
47	Arjun Singh, ditto,	32
48	Sungram Sa, ditto,	50
49	Dulput Sa, ditto,	18
50	Beernaraen, ditto,	15
51	Chunder Sa, his paternal uncle,	12
52	Mudkur Sa, his son,	20
53	Prem Naraen, ditto,	11
54	Hirdee Sa, ditto,	71
55	Chutter Sa, ditto,	7
56	Kesuree Sa, ditto,	3
57	Nurind Sa, ditto,	44 or 54
58	Mohraj Sa, ditto,	11
59	Seoraj Sa, ditto,	7
60	Doorjun Sa, ditto,	2
61	Nizam Sa, his paternal uncle,	27
62	Nurhur Sa, his nephew, son of Dhun Singh, brother of Nizam Sa, but of a different mother,	3
63	Somere Sa, ditto, 9 months.	

At the close of the reign of SUNGRA'M SA' the dominion of the *Gurha Mundala* rájas extended over fifty-two districts, but it is believed that he received from his father only three or four of these districts. This prince formed near the city of *Gurha* the great reservoirs called, after himself, the *Sungram Saugor*; and built on the bank of it the temple called the *Beejuna mut*, dedicated to BHYRO, the god of truth. Tradition says that a religious mendicant of the Sunneeasee sect took up his residence in this temple soon after it had been dedicated, with the intention to assassinate the prince in fulfilment of a vow he had made to offer up the blood of a certain number of sovereigns in sacrifice to SEWA, or the god of destruction. Taking advantage of the superstitious and ambitious feelings of SUNGRA'M SA',

* He built the temple and other works near *Teoree* whose ruins still bear his name. *Teoree* is four miles from *Gurha*, and six from *Jabulpore*. There is a stone inscribed by rája KURUN on the dedication of a temple at *Jabulpore*, dated *Samvat*, 943, A. D. 886.

† He built the town of *Goruckpore* near *Jabulpore*, and another of the same name in *Burgee*.

he persuaded him that he could by certain rites and ceremonies so propitiate the deity, to whom he had dedicated the temple, as to secure his aid in extending his conquests over all the neighbouring states. These rites and ceremonies were to be performed at night when no living soul but himself and the prince might be present; and after he had in several private conferences possessed himself of the entire confidence of the prince, he appointed the night and the hour when the awful ceremonies were to take place.

Just as SUNGRA'M SA' was at midnight preparing to descend from his palace to the temple, one of his domestics entered his apartment, and told him that he had watched this Sunneeasee priest very closely for some time, and from the preparations he was now making he was satisfied that he intended to assassinate him. He prayed to be allowed to be present at the ceremony, but this the prince refused, and descended to the temple alone but armed with a sword under his cloak, and prepared against treachery. After some trifling preparations the priest requested him to begin the awful ceremony by walking thrice round a fire over which was placed a boiling cauldron of oil, and then falling prostrate before the god; but while he was giving these instructions the prince perceived under his garment a naked sword which confirmed the suspicions of his faithful servant. "In solemn and awful rites like these," said the prince, "it is no doubt highly important that every ceremony should be performed correctly, and I pray you to go through them first." The priest did so, but after going thrice round the fire, he begged the prince to go through the simple ceremony of prostrating himself thrice before the idol, repeating each time certain mystical phrases. He was desired to go through this part of the ceremony also. He did so, but endeavouring to conceal the sword while he prostrated himself, the prince was satisfied of his atrocious design, and with one cut of his scimitar severed his head from his body. The blood spouted from the headless trunk upon the image of the god of truth, which starting into life cried out "many, many, ask, ask!" The prince prostrating himself said, "give me I pray thee victory over all my enemies as thou hast given it me over this miscreant." He was directed to adopt a brown flag, to turn loose a jet black horse from his stable, and to follow him whithersoever he might lead. He did so, and secure dominion over the fifty-two districts, was the fruit of his victories. Of these victories nothing is recorded, and little mentioned by the people.

He built the fortress of *Chouragurh*, which from the brow of the range of hills that form its southern boundary, still overlooks the valley of the *Nerbudda*, near the town of *Gururwara*, and the

source of the *Sukur* river. He continued himself to reside in the palace of MUDUN MOHUL, a part of which still stands on the hill near *Gurha*, and overlooks the great reservoir and temple in which he is believed to have offered up to the god of truth so agreeable a sacrifice in the blood of a base assassin.

He was succeeded by his son DULPUT SA', who removed the seat of government from *Gurha* to the fortress of *Singolegurh*, which is situated on the brow of a hill that commands a pass on the road about halfway between *Gurha* and *Saugor*. This fortress is of immense extent, and was built by rája BELO, a prince of the Chundele Rajpoot tribe, who reigned over that country before it was added to the *Gurha Mundala* dominions; but it was greatly improved on being made again the seat of government.

Overtures had been made for an union between DULPUT SÁ and DURGHOUTEE, the daughter of the rája of *Mohoba*, who was much celebrated for her singular beauty; but the proposal was rejected on the ground of a previous engagement, and some inferiority of caste on the part of the *Gurha* family*. DULPUT SÁ was a man of uncommonly fine appearance, and this, added to the celebrity of his father's name and extent of his dominion, made DURGHOUTEE as desirous as himself for the union; but he was by her given to understand, that she must be relinquished or taken by force, since the difference of caste would of itself be otherwise an insurmountable obstacle. He marched with all the troops he could assemble,—met those of her father and his rival,—gained a victory, and brought off DURGHOUTEE as the prize to the fort of *Singolegurh*.

He died about four years after their marriage leaving a son BEER NARAIN about three years of age, and his widow as regent during his minority; and of all the sovereigns of this dynasty, she lives most in the page of history, and the grateful recollections of the people. She formed the great reservoir which lies close to *Jabulpore*, and about a mile from *Gurha*, and is called after her "*Ranee tal*," or queen's pond. One of her slave women formed the other that lies close by, and is called after her "Cheree tal," or slave's pond. Tradition says that she

* The Mohoba family were Chundele Rajpoots, and their dominion had extended over *Singolegurh* as above stated, and also over *Belehree* or the district of *Kanoja* in which it is comprised.

The capital of *Belehree* was *Kondulpore*, three miles west from the town of *Belehree*. There is a stone inscribed by rája MULUN DEO on the dedication of a temple at *Kondulpore* dated Samvat, 815, A. D. 758. He was one of the Chundele rajas.

requested her mistress to allow the people employed on the large tank, to take out of the small one, one load every evening before they closed their day's labour; and that the Cheree tal was entirely formed in this manner. Her minister, Adhur, formed the great tank about three miles from *Jubulpore*, on the *Mirzapore* road, which is still called after him, Adhar tal; and gives name to the village in which it is situated. Many other highly useful works were formed by her about *Gurha;* and some at *Mundala* where she kept her stud of elephants, which is said by Muhammedan historians to have amounted to fourteen hundred, a number not altogether incredible when we consider the taste of the people for establishments of this sort; the fertility and extent of the country over which she ruled; and the magnitude of the works which were executed by her during the fifteen years of her regency.

Adhur was her chief financial minister, but was for some time employed as her ambassador at *Delhi;* but he was unable to prevent the invasion and conquest of his mistress' dominions. Asuf Khán, the imperial viceroy at *Kurha Manickpore* on the *Ganges*, invited by the prospect of appropriating so fine a country and so much wealth as she was reputed to possess, invaded her dominions in the year 1564, at the head of six thousand cavalry, and twelve thousand well-disciplined infantry, with a train of artillery.

He was met by the queen regent at the head of her troops near the fort of *Singolegurh*, and an action took place in which she was defeated. Unwilling to stand a seige she retired after the action upon *Gurha;* and finding herself closely pressed by the enemy she continued her retreat among the hills towards *Mundala;* and took up a very favorable position in a narrow defile about twelve miles east of *Gurha*. Asuf's artillery could not keep pace with him in the pursuit, and attempting the pass without it he was repulsed with great loss. The attack was renewed the next day, when the artillery had come up. The queen advanced herself on an elephant to the entrance of the pass, and was bravely supported by her troops in her attempt to defend it; but the enemy had brought up his artillery which opening upon her followers in the narrow defile made great havock among them, and compelled them to give way. She received a wound from an arrow in the eye; and her only son, then about eighteen years of age, was severely wounded and taken to the rear. Durghoutee in attempting to wrench the arrow from her eye broke it, and left the barb in the wound; but notwithstanding the agony she suffered she still refused to retire, knowing that all her hopes rested on her being

able to keep her position in the defile, till her troops could recover from the shock of the first discharges of artillery, and the supposed death of the young prince, for by one of those extraordinary coincidences of circumstances which are by the vulgar taken for miracles, the river in the rear of her position, which had during the night been nearly dry, began to rise the moment the action commenced, and when she received her wound was reported unfordable. She saw that her troops had no alternative but to force back the enemy through the pass or perish, since it would be almost impossible for any of them to escape over this mountain torrent under the mouths of their cannon; and consequently, that her plan of retreat upon *Mundala* was entirely frustrated by this unhappy accident of the unseasonable rise of the river.

Her elephant-driver repeatedly urged her in vain to allow him to attempt the ford, "no" replied the queen "I will either die here or force the enemy back," at this moment she received an arrow in the neck; and seeing her troops give way and the enemy closing around her, she snatched a dagger from the driver and plunged it in her own bosom.

She was interred at the place where she fell, and on her tomb to this day the passing stranger thinks it necessary to place as a votive offering, one of the fairest he can find of those beautiful specimens of white crystal, in which the hills in this quarter abound. Two rocks lie by her side which are supposed by the people to be her drums converted into stone; and strange stories are told of their being still occasionally heard to sound in the stillness of the night by the people of the nearest villages. Manifest signs of the carnage of that day are exhibited in the rude tombs which cover all the ground from that of the queen all the way back to the bed of the river, whose unseasonble rise prevented her retreat upon the garrison of *Mundala*.

Her son had been taken off the field, and was, unperceived by the enemy conveyed back to the palace at *Chouragurh**, to which Asur, returned immediately after his victory and laid siege. The young prince was killed in the siege; and the women set fire to the place under the apprehension of suffering dishonor if they fell alive into the hands of the enemy. Two females are said to have escaped, the sister of the queen, and a young princess who had been betrothed to

* *Chouragurh*, a fort which overlooks the valley of the *Nerbudda* from the brow of the southern or *Satpora* range of hills, about seventy miles west from *Jabulpore*.

the young prince Beer Narain; and these two are said to have been sent to the emperor Akber.

Asuf acquired an immense booty. Besides a vast treasure, out of the fourteen hundred elephants which is said to have composed the queen's own stud, above one thousand fell into his hands, and all the other establishments of which his conquest had made him master were upon a similar scale of magnificence*. With a soil naturally fertile and highly cultivated the valley abounded with great and useful works: and Asuf, naturally of an ambitious spirit, resolved to establish in *Gurha* an independent Muhammedan sovereignty, like those of *Malwa*, *Guzerat* and *Dukhun*; and under a weaker monarch than Akber he would, no doubt, have succeeded. After a struggle of a few years he returned to his allegiance, was pardoned, and restored to his government of *Kurha Manickpore*.

On Asuf's departure, Chooramun Bajpae, the minister and reputed lineal descendant of the spiritual guide of the founder of this dynasty, was sent to the court of Akber, to solicit a recognition of the claim of Chunder Sa', the brother of Dulput Sa', to the throne of *Gurha*. This family had immediately after the marriage of Durghoutee been invested with the title of Bajpae. The ceremonies were performed on the bank of the *Nerbudda* river, in a temple in the village of *Gopalpore* near the *Tilwara* ford, and are said to have cost four hundred thousand rupees. This agent attained the object of his mission, and Chunder Sá was declared rája of *Gurha Mundala*; but he was obliged to cede to the emperor, the ten districts which afterwards formed the principality of *Bhopaul*, viz.: *Gonour, Baree, Chokeegurh, Rahtgurh, Mukurhae, Karoo Bag, Karwae, Raeseyn, Bhowrasoo, Bhopaul.*

Of Chunder Sa's reign little is known, and that little of no importance†. On his death he was succeeded by his second son, Mudkur Sa', who treacherously put his elder brother to death. He was the first prince of this house that proceeded to the imperial court to pay his respects in person: and he did so ostensibly with a view to appease the emperor by the voluntary surrender of his person, but virtually for the purpose of securing the support of his name against the vengeance of the people. But the vengence of heaven is supposed by them to have overtaken him.

* Among other things taken in *Chouragurh* were one hundred jars of gold coins of the reign of Allah-uddeen, the first Mahommadan general that crossed the *Nerbudda* river. See Brigg's translation of Ferishta. Some of those coins are still worn by the women of *Gurha* as charms.

† During the life of Durghoutee and his nephew he resided at *Chanda*; and is said to have entered into the service of the prince of that country.

He became afflicted with chronic pains in his head and limbs, which he was persuaded were inflicted on him by Providence for his crime. The disease was pronounced incurable; and, as the only means of appeasing a justly incensed deity, he was recommended to offer himself up as a voluntary sacrifice, by burning himself in the trunk of a dry peepul tree. An old one sufficiently dry for his purpose being found in the village of *Deogaw*, about twelve miles from *Mundala*, he caused himself to be shut up and burnt in it; and the merit of the sacrifice is considered to have been enhanced by the sacred character of the tree, sacred to SIVA, in which it was made. His eldest son, PREM NARAIN had been in attendance upon the emperor at *Delhi*, but he returned to the *Nerbudda* on receiving intelligence of his father's death, leaving his son HIRDEE SA' to represent him at the imperial court. Unfortunately, in his haste, he omitted, it is said to return the visit of BEER SINGH DEO, rája of *Archa*, before he left court; and that proud prince on his death-bed shortly after is said to have made his son, JHOOJHAR SINGH, swear to revenge the insult by the invasion and conquest of *Gurha*, or perish.

He soon after marched at the head of all the troops he could muster, and PREM NARAIN finding himself unable to oppose him in the field, threw himself into the fort of *Chouragurh*, where he was for some months closely besieged. JHOOJHAR pretended at last to raise the siege. He drew off his troops, and descended into the plains, where he invited PREM NARAIN to come and adjust with him in person the terms of peace. He was prevailed upon to do so on the faith of a solemn oath; and accompanied by his minister, JEYDEO BAJPAE, proceeded to the tent of his enemy, where they were treacherously murdered by assassins hired for the purpose. He again invested the fort, which having no head soon surrendered; and all the other garrisons in the *Gurha* dominions followed the example.

News of this invasion and of the death of his father was soon conveyed to HIRDEE SA', then in attendance upon the emperor at *Delhi*. He left court, and unable to procure any assistance in troops, returned in disguise to the *Nerbudda*. Near the fortress of *Chouragurh* he is said to have met his old nurse; and, on being recognised by her, was told where his father had deposited a large sum of money, which, with her assistance, he got into his possession. He then made himself known to many of the most powerful and influential landholders of the country, who brought all their followers to his support; and with their aid, added to that of the Muhammadan chief of the ten ceded districts of *Bhopal*, he soon made head against the enemy; possess-

ed himself of all the twenty-two military posts of his kingdom; and at last ventured to come to a general action with him near the village of *Koluree*, in the district of *Nursingpore*. Jhoojhar Singh was defeated and killed; and the fortress of *Chouragurh* was surrendered immediately after the action, which was fought within sight of the walls.

In return for the services rendered by the chief of *Bhopal*, Hirdee Sá assigned the district of *Opudgurh*, containing three hundred villages. He sent back the widow and family of Jhoojhar Singh to *Bundelkhund*, by which he is said to have won so much upon the esteem and gratitude of the members of this family and the people of *Bundelkhund* in general, that they made a solemn vow never again to invade his dominions.

It may here be remarked that Jhoojhar Singh had two brothers, Dewan Hurdour, alias Hurdour Lala, and Puhar Singh; that the former is said to have been poisoned by one or other of his brother's wives; and that when the cholera morbus broke out in the valley of the *Nerbudda* for the first time in 1817, when occupied by our troops, it was supposed to have been occasioned by the spirit of this Hurdour Lala, descending into the valley in the north wind blowing down from the territories of *Bundelkhund*. It first broke out I believe among the troops while they were stationed on the plain between the garrison of *Chouragurh* and the village of *Koluree*, the place where the action was fought, and it is said to have begun its ravages while the north winds prevailed. These circumstances added to that of Hurdour Lala's having always been propitiated by some offering or prayer, whenever a number of people were congregated together for whatever purpose, lest he should introduce discord or evil of some kind or other among them, made it believed that he was the source of this dreadful scourge; for the custom of propitiating him was entirely local, and our troops had disregarded, or indeed had perhaps never heard of the necessity. From that day small rude altars were erected to Hurdour Lala in every part of the valley, surrounded by red flags erected on bamboos, and attended by prostrated thousands; and from the moment a case of cholera morbus occurs, every native inhabitant of this valley, whatever be his religion, rank or sect, deprecates the wrath of Hurdour Lala*.

* It is said that one of Lord Hasting's camp-followers slaughtered a bullock near the tomb, and that the cholera broke out in consequence; that after many thousands had perished, one man afflicted with the disease thought of Hurdour Lala, and vowed an offering to him if he recovered. He got well, and built a temple to him; others did the same, and the disease ceased. From

HIRDEE SA', now secure in the possession of his dominions, turned his attention to the improvement of the country, which had suffered much from the ravages of war, and the internal disorders introduced by these revolutions of government. He planted many groves. Among the former, the grove in which the cantonments of *Jubulpore* now stand, was the largest; and it is said to have contained, as its name *Lakheree* imports, one hundred thousand mango trees. The greater part of these have gone to decay, or been cut down; and some thousands of them have been felled since we took possession of the country. Among the reservoirs that he formed, the largest was *Gunga Saugor*, a fine piece of water in the vicinity of the town of *Gurha*. He died at a very advanced age, after a reign of seventy-one years, dating from the death of his father, PREM NARAIN; and was succeeded by his son CHUTTER SA'. The inscription on the stone at *Ramnugur* bears date *Samvat* 1724, and was made in HIRDEE SA"s reign, which commenced it is said in *Samvat* 1653, A. D. 1596, so that he must have reigned seventy-one years, even supposing that he died immediately after it was made.

His second son, HUREE SINGH, demanded of his elder brother a division of the territories: but he was soon reduced to obedience: and during the life of CHUTTER SA' remained afterwards quiet upon his jageer. CHUTTER SA' died after a reign of only seven years; and was succeeded by his son KESUREE SINGH; but HUREE SINGH, thinking the occasion favorable for his ambitious views, and failing in his attempt to get himself proclaimed as successor to his brother, invited to his assistance the rája of *Bundelkhund*. With this support he made an attack upon his nephew; and getting possession of his person he treacherously put him to death after he had reigned three years.

KESUREE SA' had a son, NERIND SA', then about seven years of age, whom RAMKISHUN BAJPAE, the son of KAMDEO, who had accompanied HIRDEE SA', in his attendance upon the emperor, and shared in his subsequent fortunes, rescued from HUREE SINGH, took to *Ramnugur*, near *Mandala*, and there caused him to be proclaimed as rightful sovereign. Collecting a strong force of the better disposed people, he returned, defeated and killed HUREE SINGH in an action, and drove his son, PUHAR SINGH, with all his troops from the field. An agent was sent off to the imperial court, to demand the emperor's sanction to his accession to the throne; and five districts were assigned to the emperor on the occasion, *Dhumonee*, *Huttah*, *Mureeah Deh*, *Gurha Kotah*, and *Shahgurh*.

that time temples have spread through almost every village in India to HURDOUR LALA.

Puhar Singh was a brave and enterprising man; and finding no prospect of making head against the young prince for the present, he led off his followers, and joined the army of the emperor Aurungzebe then employed in the siege of *Beejapore** and served under the command of Dilere Khan, where he had frequent opportunities of distinguishing himself; and the general was so much pleased with his services that after the fall of *Beejapore* he sent with him a body of troops under the command of Meer Jyna and Meer Manoollah, to assist in his attempts upon *Mundala*. He was met by the young prince, his cousin, near the banks of the *Doodhee* river at *Futtehpore*, where an action took place, in which Nerind Sa' was defeated, and his general killed.

He retired upon *Mundala* accompanied by Ramkishun, the faithful minister who had secured him from the father of Puhar Singh. Not feeling himself secure at *Mundala* he proceeded to *Sohagpore*, where he collected around him his scattered forces, and became again able to face his cousin in the field, as the troops which the Moghul general had sent to assist him, were returned to the *Dukhun*. They came to an action near the village of *Ketoogow*, where Puhar Singh was defeated and killed. On the death of their leader all his troops dispersed, or entered into the service of the victor; who returned to *Mundala*, and thenceforward made that place the seat of his government.

Puhar Singh had two sons in the action who fled from the field as soon as they saw the troops give way after their father's death; and returned to the imperial camp, in the hope of obtaining further assistance. Every other endeavour to interest the emperor in their fortunes proving fruitless, they at last, stimulated by the desire to revenge their father's death, and to acquire the sovereignty of the *Gurha* dominions, renounced their religion for that of *Islam*, and obtained the support of a small body of troops with which they returned to the valley of the *Nerbudda*, under the acquired names of Abdor Ruhman, and Abdol Hajee. They were to have been joined by a *Murhutta* force under Gunga Jee Pundit; and Nerind Singh, distrustful of his strength, sent an agent to endeavour to bring his two cousins to terms before this force should join.

This agent they put into confinement, under the pretence that he was serving a rebel against their legitimate authority, but he soon effected his escape; and, being well acquainted with the character of the *Murhutta* partisans, proceeded immediately to their camp, and by

* *Beejapore* surrendered to the emperor Aurungzebe, 15th October, 1686.

the promise of a larger sum of money than the commandant expected from the young apostates, prevailed upon GUNGA JEE to join his force to that of his master, strengthened by this body of marauders, NERIND SINGH ventured a general action, in which his cousins were defeated and both killed.

His authority was now undisputed, but these frequent attempts of his relations cost him a great part of his dominions, as he was obliged to purchase the aid of neighbouring princes by territorial cessions. In this last contest with his cousins he was ably assisted by two Pathan feudatories, AZIM KHAN, who held in *jageer*, *Barha*, a part of the *Futtehpore* district (14), and LONDEE KHAN, who held the district of *Chouree* (19). Taking advantage of these disorders and of the weakness of their prince they attempted to establish an independent authority over all the territories south of the *Nerbudda*. The prince invited to his support the celebrated BUKHT BULUND, rája of *Deogurh*; and with their united force defeated the two Pathan rebels, and killed LONDEE KHAN at *Seanee*, in the district of *Chouree*, and AZIM KHAN, near the village of *Koleree*, in the valley of the *Nerbudda*. For this assistance NERIND SA' assigned to BUKHT BULUND the districts of *Chouree* (19), *Donger Tal* (20), and *Goonsour* (18).

During these struggles he is said to have assigned to CHUTTER SAUL, rája of *Bundelkhund*, the five districts of *Gurpehra* (34), *Dumoh* (35), *Rehlee* (36), *Etawa* (37), and *Khimlassa* (38), which afterwards formed the province of *Saugor*. Two districts, *Powae* (27), and *Shanugur* (29), had before been assigned to the chief of *Bundelkhund*. He was obliged to assign to the emperor, it is said, for a recognition of his title, the five districts of *Dhumonee* (29), *Huttah* (30), *Mureea Deh* (31). *Gurhakota* (32), *Shahgur* (33)*. He also assigned *Purtabgurh* (10) in *jageer* to GHAZEE RAE LODHEE, who had served him faithfully and bravely in the contest with PUHAR SINGH and his sons.

NERIND SA' died after a reign it is said of forty years, A. D. 1731†, leaving to his son MAHRAJ SA', only twenty-nine of the fifty-two districts which had composed the *Gurha Mundala* dominions under his ancestor, SUNGRAM SA'. After a peaceful reign of eleven years, MAHRAJ SA''s dominions were invaded by the Peshwa for the purpose of levying the tribute which it was impudently pretended that the *Sutarah* rája had granted to him the right to levy in all the territories north of the river *Nerbudda*. MAHRAJ SA' resisted his demand

* These had been assigned before by NERIND SA' after the defeat of HUREE SINGH; and the cession was merely confirmed.

† It must have been 54 years.

and stood a siege in the fort of *Mundala**. It was soon taken and the prince put to death. He left two sons Sewraj Sa' and Nizam Sa', and the eldest was put upon the throne by Bajee Rao, on condition that he should pay four lakhs of rupees a year as the chout, or quarter of his public revenue, in tribute. By this dreadful invasion of the Peshwa with his host of freebooters, the whole country east of *Jubulpore*, was made waste and depopulate, became soon overgrown with jungle, and has never since recovered†. The revenue of the rájas, in consequence of this invasion, and the preceding contests for sovereignty between the different members of the family, and the cessions made to surrounding chiefs, was reduced to fourteen lakhs of rupees per annum.

Being unable to resist the encroachments of Raghoojee Ghosla, who had under the pretended authority of the *Sutarah* rája to collect the chout, assumed the government of *Deogurh* from the descendants of Bukht Bulund, he lost the six districts which had anciently comprised the whole of the dominions of the *Haihaibunsee* sovereigns of *Lahurjee Kurwagurh* (21), *Shanjun Gurh* (22), *Lopa Gurh* (23), *Santa Gurh* (24), *Deeba Gurh* (25), *Banka Gurh* (26).

Sewraj Sa' died at the age of thirty-two years, A. D. 1749, after a reign of seven years, and was succeeded by his son Doorjun Sa', a young lad of the most cruel and vicious dispositions. A great many of the principal people having been disgusted with numerous instances of his wickedness, his uncle, Nizam Sa', determined to avail himself of the opportunity, and to attempt to raise himself to the throne by his destruction. He recommended him to make a tour of inspection through his territories, and after much persuasion he was prevailed upon to leave *Mundala* for the purpose.

Nizam Sa' had successfully paid his court to Belas Koour, the widow of his deceased brother, Sewraj Sa', but not the mother of the reigning prince, who was by a second wife, and had prevailed upon her not only to consent to the destruction of Doorjun Sa', but to promote it by all the means in her power. She was a woman of great

* This invasion of Balajee Bajee Rao took place, A. D. 1742.—See Duff's History of the Muhruttus.

† It may be remarked that in districts so situated, the ravages of war and of internal misrule are repaired with more difficulty and delay than in others. In the first place, the air however salubrious while the districts are in cultivation, becomes noxious when they are allowed to run to jungle; and men are prevented from coming to fill up the void in the population. In the next, the new fields of tillage in such situations are preyed upon by the animals from the surrounding hills and jungles; and the men and cattle are destroyed by beasts of prey.

ambition, and during the lifetime of her husband had always had a great share in the administration of the government. She saw no prospect of being consulted by the young prince, but expected that NIZAM SA' would, if assisted by her in seizing the government, be almost entirely under her management. She, therefore, entered into his schemes, and urged the young prince to proceed on this tour of inspection, with a view of removing from the capital the troops, who were for the most part greatly attached to him, in this tour; but the day that the prince left *Mundala*, NIZAM SA' pretended that his feelings had been hurt by some neglect on the part of his nephew, and refused to move. This had been concerted between him and BELAS KOOUR, who now insisted that the prince ought to return, and, by conducting his uncle to camp in person, offer some reparation for his pretended neglect.

The unsuspecting youth, at the suggestion of his step-mother, returned to *Mundala* accompanied by only a few followers, and among them LUCHMUN PASBAN, a man of extraordinary strength and courage, who always attended him. They alighted at the door of NIZAM SA"s house, and immediately entered the court; but before any other could follow, the door was closed upon them. LUCHMUN called out "Treason," seized the young prince by the waist, and attempted to throw him upon the wall of the court yard, which was about ten feet high; but in the act of doing it, he received, in his right side, a cut from the sabre of GOMAN, a follower of NIZAM SÁ. This checked the effort, and the prince, unable to reach the top, fell inside: and before LUCHMUN could grasp his sword his right arm was severed from his body by a second cut from the sabre of GOMAN. Leaving him to be despatched by his, GOMAN's, father, LOKSA and his two brothers, whom NIZAM SÁ had employed to assist him in this assassination, GOMAN, now made a cut at the forehead of the young prince, who staggered and fell lifeless against the door, which his followers were endeavouring in vain to force from the outside.

A shout from the inside "that NIZAM SÁ was king," echoed from the partisans of BELAS KOOUR without, added to the general unpopularity of the young prince, completed the revolution; and all that remained was, to satisfy those who might be glad to avail themselves of the opportunity to invade the country under the pretence of punishing the regicides and usurper. An agent was immediately sent off to the Peshwa; as the paramount authority, and to pacify him the districts of *Pana Gurh* (50), *Deoree* (51), and *Gorjainur* (52), were assigned in lieu of the tribute which had been promised on the death of

Mahraj Sá, and the accession of Sewraj Sa'. These districts were subsequently formed into the five muhals of *Deoree, Tendookera, Chawurpata, Goor Jamur, and Nahir Mow.* When Nizam Sá, ascended the throne he was twenty-seven years of age; and the cruel and unpopular conduct of his nephew, during the short interval of six months that he reigned, added to his own fine person, affable manners, and great capacity for business, soon reconciled all classes of the people to his government. He turned his attention entirely to the improvement of his country, and the cultivation is said to have extended, and the population a good deal augmented, during his long reign.

Nizam Sa' died after a reign of twenty-seven years at *Gurha* in the year *Samvat*, 1833, A. D. 1776, leaving, as it was pretended, one child, a son, Mihpal Singh, then about one month old, and a recognition of his title to the succession was obtained from the chief of *Saugor*, acting ostensibly under the authority of the Peshwa.

About the year *Samvat*, 1790 or A. D. 1733 Muhammudun Khan Bungush was transferred from the government of *Allahabad* to that of *Malwa*; and he attempted the conquest of the districts of *Bundelkhund* from Chuttersal, an enterprising chief who availed himself of the disorders of the empire, and the absence of the imperial armies in the *Dukhun*, to put himself at the head of the discontented Hindu chiefs in that quarter, and form for himself a valuable independent principality. Chuttersal finding himself too weak to resist so powerful an enemy, invited the assistance of Bajee Rao the Peshwa, who marched to his support at the head of a large body of cavalry, defeated Bungush, and made him evacuate the whole of the territories he had invaded and seized. Chuttersal was so well pleased with the able support the Peshwa had given him in his utmost need, that he adopted him as a third son, and assigned over to him, as an immediate recompence, a garrison and territory in the vicinity of *Jhunsee*, worth above two hundred and twenty-five thousand rupees a year.

Chuttersal died in the year A. D. 1735, and the Peshwa sent his confidential agent Gobind Pundit, to demand his share of the chief's dominions as the third son, so styled after the late contest. He met Hirdee Sa' and Jugut Raj, the two sons of the deceased chief, and obtained the cession of the districts of *Saugor, Gurpehra*, &c. &c. yielding an estimated annual revenue of about thirty-six lakhs of rupees. Gobind Pundit remained in charge of these districts as *Mukusdar*, and transferred the seat of government from *Gurpehra* to *Saugar*, where he built a fortress and town upon the borders of a very handsome lake. He extended his conquests and authority over

other chiefs and districts to the eastward as far as *Culpee;* and repelled an attempt on the part of SHOOJA-OD DOULA, the nuwab wuzier of *Oude,* to wrest from him his newly acquired possessions in that quarter*. An army which the nawub sent into *Bundelkhund,* under the command of MEER NAEM was defeated and driven back with great loss.

Having secured his dominions in *Bundelkhund* he returned to *Poona,* where he was received with all the respect and acknowledgments due to his highly important services. He returned to *Bundelkhund,* left his son-in-law BEESA JEE, as his representative at *Saugor,* and removed the seat of his government to *Culpee.* In the year *Samvat,* 1815, A. D. 1758, GOBIND Pundit accompanied SUDA SEO BHAO and BISWAS RAO, the son of the Peshwa, to *Delhi;* and in 1817 *Samvat* was killed on the plains of *Paneeput,* in an attempt to escort provisions to the troops immediately before the celebrated battle of that name, in which the brother and son of the Peshwa both lost their lives.

This disaster was nearly fatal to the *Murhutta* dominions in *Bundelkhund.* Their troops fled from *Culpee,* and the chiefs took advantage of the general consternation to regain their independence, and extend their possessions. BEESA JEE, with the assistance of JANOO GHOSLA, reduced them to obedience, and retained possession of all the districts placed under his charge. BULA JEE BABA, and GUNGA DHUR NANA, the two sons of GOBIND JEE, went to *Poona;* and were there invested with the government of *Bundelkhund,* in consideration of the merits and services of their father. BULA JEE was the governor, and GUNGA DHUR was to act as deputy under him. The former was so well pleased with the management of BEESA JEE, that he continued him in the government of *Saugor;* and proceeded himself, accompanied by GUNGA DHUR, to *Culpee.* BEESA JEE was soon after summoned by the governor of the fortress of *Mulhargurh,* to which rája RAM GOBIND on the part of RUGHOBA, the pretender to the office of Peshwa, assisted by all the disaffected chiefs of the country, had laid siege. By the timely assistance afforded by BEESA JEE the seige was raised; and he was soon after engaged in the fruitless attempt to prevent the march through his territories of a British detachment under the command of Colonel GODDARD. See my account of GODDARD's march†.

* See KHYR OD DEEN's account of this invasion.

† Published in the Literary Gazette, 10th February, 1833.

GOBIND PUNDIT

BULAJEE	GUNGA DHUR
ABHA SAHIB	NANHA SAHIB,
BAEE SAHIB his widow who now receives a pension of ninety-six thousand, (96,000) rupees a year. second wife died 1868, *Samvat.*	RÁJA SAHIB, died without issue, but his widow has been allowed to adopt her *own brother* to secure her possession.

BEESA JEE recognized in due form the right of MIHPAUL SINGH to succeed his father NIZAM SA' on the throne of *Mundala;* but the queen dowager, BELAS KOOUR, insisted upon placing on the throne the prince NURHUR SA', a young man of about twenty-five years of age and son of DHUN SINGH, the younger brother of NIZAM SÁ, and next heir to the throne. She, as the widow of SOORUJ SA', pretended to have a right to bestow the government as she pleased; and the usurpation of NIZAM SA' having been excused on this ground, many would have been found sufficiently willing to avail themselves of it, in order to raise themselves to wealth and consequence, had the birth and title of MIHPAUL SINGH not been at all questionable. The leaders of her party were SAUDUT KHAN the Pathan jageerdar of *Surrenugur,* and PRETHEE SINGH, jageerdar of *Petehra.* The leaders of the party of the young child were RUGBUNS BAJPAE, and his son MUKUND. His brother BIKRAM BAJPAE, and his son GUNGA PERSAUD, together with GUNEYS PASBAN, the treasurer.

The Dowager determined upon the destruction of the opposite party. SAUDUT KHAN invited to his house, which was situated outside the fort at *Mundala,* GUNEYS PASBAN, his sons GIRDHUR and NUNDHA, and his brother MORUT SINGH, on the pretence of making arrangement for an advance of pay to his troops; and GUNGA GIR Mohunt, a large banker went as guarantee to any agreements they might make with him. Soon after they had entered on business SAUDUT KHAN took GUNGA GIR aside on the pretence of wishing to speak with him in private*; but the moment they left the room the assassins, who were placed around, and waited only for this signal, rushed in and fell upon the party. The two young men drew their swords and defended themselves and their father for some minutes;

* GUNGA GIR is generally admitted to have been a party to this murder.

but overpowered at last by numbers, they all fell. SAUDUT KHAN went off immediately to the Dowager's palace within the fort; and was directed to proceed immediately, surround the house of RUGHUNS BAJPAE and his family, and put them into confinement. He surrounded their house with a body of his troops, and summoned the old man to surrender. He refused, and the troops began to fire in at the windows, seeing no chance of escape without disgrace, the men put the women and children to death, set fire to the house, and then rushed out upon the assassins, making great slaughter among them till they all fell covered with wounds.

It was thought that of about one hundred and twenty-two members of which this family was composed, not one had escaped; but it was afterwards found that PURSOTUM, the son of MOKUND BAJPAE, a lad of about nine years of age, had been taken away by his nurse in the midst of the confusion and carnage of the *Johur*; as also that GUNGAPERSAUD, the son of BIKRAM BAJPAE, had been discovered still living among the wounded. These were concealed among the friends of the family for a month, when the ranee began to manifest feelings of regret at the massacre of this family, and of anxiety to discover some surviving member. The two survivors were brought to her, and she conferred upon PURSOTUM the purguna of *Suroulee* in jageer. It is now very generally believed that MIHPAUL SINGH was not the son of NIZAM SA'; and that he was brought forward by RUGHUNS BAJPAE, merely for the purpose of securing the continuance of his influence in the administration of the government.

NURHUR SA' having now been seated on the throne by the consent of both parties, another competitor made his appearance. SOMERE SÁ was the illegitimate son of NIZAM SA'; and in ordinary times such sons never pretended any claim to succeed to the throne while a legitimate son survived even in any collateral branch of the family. On the present occasion of a disputed succession, SOMERE SA' set up his pretensions, and invited the Murhutta chief of *Nagpore*, MONDAJEE, to his assistance. He marched to invade *Gurha Mundala*, but was met by the ministers of the dowager, and induced to return to *Nagpore* on a promise of three hundred and seventy-five thousand rupees. This agreement NURHUR SA' refused to ratify; but SOMERE SA' had by this time gone off to solicit aid from *Saugor*.

BEESA JEE demanded an explanation from NURHUR SA', who sent an accredited agent to him; but refused to attend to the suggestions of this agent, that he should purchase BEESA JEE's recognition of his title, and advance SOMERE SÁ a sum of money, which might have been

effected for about four hundred and fifty thousand rupees; and Beesa Jee marched at the head of a large force from his cantonments at *Dumow*. At *Teyjgur* he was opposed by Chunder Huns, who held that purguna in jageer under the rája; but he soon defeated him, and advanced into the valley as far as *Patun*, where he was opposed by Saudut Khan, Gunga Gir, and the jageerdar of *Mangur*, all of whom he soon dispersed, and advanced without further opposition to *Mundala*.

He deposed Nurhur Sa', and put Somere Sa' on the throne; and removed Saudut Khan, and Gunga Gir Mohunt from all share in the government, appointing in their place, as prime minister, his brother Dadoo Pundit, with the assignment of jageer of *Sureenagur*. The purguna of *Sehora* was assigned as a nuzurana to the Peshwa, and a fine of thirty hundred thousand rupees was imposed upon the government. In this fine however credit was given for thirteen hundred thousand rupees taken from the palace in money and jewels, a bond was drawn out for the payment of fourteen hundred thousand in ten years by ten equal instalments: and for the payment of three within a specified time. Pursotum Bajpae and Sew Gir Gosaen were taken as hostages. Beesa Jee returned to *Jabulpore*, sent the greater part of his troops back to *Saugor*, and took up his residence at *Gurha*.

Somere Sa' apprehensive that Belas Koour would endeavour to get Nurhur Sa' restored, and that the Murhutta would be easily persuaded to accede to her wishes with a view to promote their own interests by another change in the government, determined to make away with her. He left *Mundala* with the pretended intention of visiting *Jabulpore*, but from the first stage he sent back Incha Singh with a letter addressed to the dowager. He knew that she always heard every letter addressed to her read; and that this would give the assassin an opportunity of despatching her. Belas Koour came to the door to hear the letter read, and was instantly cut down by Incha Singh. Beesa Jee attributed the assassination to Somere Sa', and made preparations to revenge it by removing him from the throne: he was not backward in preparations to defend himself. He was joined by Saudut Khan of *Sureenagur* and Chunder Huns; and with these and other feudatory chiefs he advanced towards *Saugor*, in order to attack Beesa Jee before he should get into the valley. The two chiefs came to an action near *Mangur*. Chunder Huns was killed early in the fight; and his followers giving way threw into confusion those of Saudut Khan, who retreated with great precipitation upon *Chouragurh*. Somere Sa' made good his retreat to *Mundala*, and Beesa Jee advanced as

far as *Gurha*, where he opened a negotiation with NURHUR SA', for his restoration to the throne on condition of GUNGA GIR becoming the security for the payment of the money due to him by the last treaty. Having prevailed upon SOMERE SA' to come from *Mundala* on the promise of a pardon, he seized him at *Tilwara ghat*, and sent him a close prisoner to *Saugor*, where he was confined in the fort of *Goor Jamur*. NURHUR SA' having agreed to BEESA JEE's terms, was taken to *Mundala* and put on the throne; but MORAJEE was left with a body of the *Saugor* troops in command of the garrison, and NURHUR SA' discovered that he was sovereign merely in name.

BEESA JEE returned to *Gurha*: and, considering his authority to have been now securely established, he sent part of his troops back to *Saugor*, left the greater portion of what he retained at *Jubulpore*, and encamped with only a few followers about two miles distant, and close outside the city of *Gurha*, to the west,

Taking advantage of his carelessness GUNGA GIR Mohunt collected together a body of five hundred Gosain horsemen; attacked him about midnight; put him, his brother DADOOBA, and the greater part of their followers to the sword; and caused such a panic among the great body of his troops which were posted at *Jubulpore*, that they all made a precipitate retreat towards *Saugor*, with the exception of twelve Murhutta horsemen who entered the service of GUNGA GIR. Hearing of this successful attack upon BEESA JEE, the feudatory and other chiefs about *Mundala*, who were opposed to the *Saugor* rule, collected together round *Mundala*, and cut off MORAJEE's supplies. He knew that he could not stand a siege, and requested permission to retire with his troops unmolested to *Saugor*. With his small detachment he made good his retreat all the way to *Saugor*, where he soon made preparations to recover the country which had been lost by the imprudence of BEESA JEE, and to revenge his death. GUNGA GIR Mohunt was now joined by SAUDUT KHAN, who had been dispossessed of his jageer of *Sureenugur* by BEESA JEE; and they advanced to meet MOORA JEE so far as *Teyzeer*. Here an action took place; the troops of GUNGA GIR gave way on the first discharge of the artillery of MOORA JEE; and those of SAUDUT KHAN were thrown into confusion by the death of their leader, who was shot in the breast by one of the twelve Murhutta horsemen, who had entered their service after the attack upon BEESA JEE. His remains were buried upon the spot where he fell, and his tomb is still to be seen there.

GUNGA GIR with the deposed prince, NURHUR SA', whose cause he was supporting, fled precipitately from the field, the former towards

Mundala and the latter towards *Chouragurh*, in order to distract the attention, and divide the forces of Moora Jee. He however knew his enemies too well, and pursued closely and incessantly the most formidable, Gunga Gir, who was enabled to collect a few forces in passing by *Mundala* and *Ramgurh*, and to make a stand at *Bhurura*, near *Kombhee*, and on the bank of the *Heerun* river. Beaten here he retired upon *Chouragurh*, where the prince, Nurhur Sa', had now been joined by a considerable force, which Deo Gir, the adopted son of Gunga Gir, had brought from *Chundele*. Their force united at the village of *Singpore*, where they were again beaten by Moora Jee; and obliged to take shelter in the fort of *Chouragurh*, which he immediately invested, and very soon took, as it is supposed, by the treachery of Pudum Singh, the jageerdar of *Delehree*.

Nurhur Sa' was sent prisoner to the fort of *Korae* in the purguna of *Kimlassa*; and Gunga Gir to *Saugor*, where he was soon after put to a cruel death by having his hands and legs tied together, and in this state being suspended to the neck of a camel, so that he might come in contact with the knee. The animal was driven about the streets of *Saugor*, with the Mohunt thus suspended to his neck, till he was dead. Kuramut Khan, was taken prisoner in the action of *Legzgur*, and sent to *Saugor* where he was ransomed for twelve thousand rupees by Adhur Opudeea, in gratitude, it is said, for former acts of kindness. He returned to *Sureenagur*, but was soon after obliged to retire with his family, and take up his residence at *Chapara*. Nurhur Sa' died in prison in the fort of *Korae* a few years after, *Samvat* 1846 or A. D. 1789.

Somere Sa' was afterwards released and in 1861 *Samvat* or A. D. 1804, he was killed in an action which took place at *Kislae*, between Rughonath Row the subadar of *Deoree*, and Luchmun Singh jageerdar of . He had taken the part of the latter of these chiefs in a contest for dominion.

[To be continued.]

Geography.

It would be difficult to convey any very precise idea of the boundaries of the *Gurha Mundala* dominions when most extended, by description, because they were not marked out by any very distant geographical lines, while those of a political character are either too little known or have been too often changed to afford any assistance. They comprised at the end of the reign of Sungram Sa', who died the year *Samvat* A. D. the following fifty-two *gurks* or districts.

No. of villages.

750 1 *Gurha*, or the territory lying between the rivers *Nerbudda*, *Heerun*, and *Gour*.

750 2 *Maroo Gur*, that lying east of the *Gour* river, and including *Mundala*.

750 3 *Puchele Gur*, that lying between the rivers *Burma* and *Mahanu ee* now the purguna of *Kombee*.

350 4 *Singole Gurh*, that lying between the *Heerun* and the *Heerma* rivers.

750 5 *Amodah* bounded to the by the *Soor* river, and to the by *Kanaree*.

750 6 *Kanooja*, bounded to the by the *Omur* river and to the north by the *Olonee* river the by the village of *Kumarore* and including what is now the purguna of *Belehree*.

750 7 *Bugamara*.

750 8 *Teepagur*.

750 9 *Raegur*.

750 10 *Pertabgur*.
750 11 *Amurgur*. } All now included in the *Ramgur* rája's estate.
350 12 *Deohur*.

360 13 *Palungur*.

750 14 *Futtahpore*, bounded to the east by the *Doodhee* river; the north by the *Nerbudda*; to the west by the village of *Turone*; and to the south extending into the hills.

750 15 *Numooagur* bounded to the west by the *Doodhee* river; the north by the *Shere*; and to the south extending into the hills.

360 16 *Bhowurgur*, bounded to the west by the *Shere*; the north by the *Nerbudaa*; east by the *Deo* rivers; and to the south extending into the hills.

750 17 *Burgee*, bounded to the west by the *Deo* river; to the north by the *Nerbudda*; and west by the *Bungur*.

750 18 *Ghoonsour*, bounded to the by the *Bangunga*; to the by the *Thavur*.
360 19 *Chouree*, to the south by the *Punjdhur* river, now *Seonee*.
750 20 *Dougertal*, to the north bounded by the *Punjdhar*, and to the south by the *Soor* river.

} Assigned by Narind Sa, to Bukhtbulund about A. D. 1700.

750 21 *Kurwagur.*
750 22 *Jhunjungur.*
750 23 *Lapagur.*
350 24 *Soutagur.*
350 25 *Deehagur.*
750 26 *Bunkagur.*

These six districts comprised the ancient dominions of the *Haihaibunsi* sovereigns as of *Langee.*

750 27 *Powae Kurheya.*
750 28 *Shahnagur,* bounded to the south by the *Alonee* river; to the east by to the west by

Assigned to Chutter Saul by Hirdee Sa'.

750 29 *Dhumonee.*
750 30 *Huttah.*
360 31 *Mureea Deh.*
360 32 *Gurha Kotah.*
750 33 *Shahgur.*

Said to have been assigned to the emperor by Narind Sa'.

360 34 *Gurpehra.*
750 35 *Domoa.*
360 36 *Rehlee,* and *Rahngir.*
360 37 *Etaw.*
750 38 *Khimlasa* and *Korae.*

Forming the province or division of *Gurpehra,* since called *Saugor.*

Assigned to Chutter Saul by Narind Sa'.

750 39 *Goonow.*
750 40 *Baree.*
360 41 *Choukeegur.*
360 42 *Rahtgur.*
750 43 *Mukurhae.*
750 44 *Karoo Bagh.*
750 45 *Koorwae.*
360 46 *Rae Seyn.*
750 47 *Bhowraso.*
360 48 *Bhopaul.*

Since forming the *Bhopaul* principality.

350 49 *Opudgar,* subsequently added to the *Bhopaul* dominions.

750 50 *Punagur.*
750 51 *Deoree.*
750 52 *Gourjumur.*

Subsequently formed into 5 *Muhals.*

1 *Deoree.*
2 *Tendoo Kera.*
3 *Chumurpurta.*
4 *Gour Jamur.*
5 *Nuhur Mow.*

The capital of the Gond rája had been *Gurha;* and this continued to be the residence of the Rajpoot princes up to the reign of Dulput, who transferred his residence to *Singolegurh.* This fortress which is of immense extent, was built by a rája Bele, it is said, a prince of the *Chundele* Rajpoot tribe, who reigned over that part at some former period.

Another prince of that tribe is said to have reigned at *Belehree* over that part, which formed the district of *Kanooja*, or number six in this list.

The valley of *Jubeyra*, which now comprises several cultivated and peopled villages, was then a lake formed by a bund of about half a mile long, one hundred and fifty feet thick, and one hundred feet high, made with sandstone cut from the *Bhundere* range of hills close by. This *bund* is a curious work, and stands about four miles from the village of *Jubeyra*, to the southeast. It is said that it was cut through by the Mahommudun army in the invasion, but it seems to have burst of itself from the weight or overflowing of an unusual quantity of water ; and a branch of the *Beermee* river now flows through the middle of it. *Singolegur* once overlooked this magnificent lake. This however must have been insignificant compared with the lake which at the same time covered the *Tal* purguna, in the *Bhopaul* territory, on the site of which are now some seven hundred villages I believe. The bund which kept in this mass of water united two hills in the same manner as that near *Jubeyra ;* but was of greater magnitude and of more elegant construction.

Ranee DURGHOUTEE appears to have changed the seat of government partially though not altogether to *Chouragurh*, a fort which is situated on the brow of the *Sathpore* range of hills, and which overlooks the valley of the *Nerbudda*, about twenty miles from the station of *Nursingpore ;* for we find ASUF KHAN after her defeat and death marches to *Chouragurh*, and there finds her family and treasure. It is however probable that she merely sent them there for security on the approach of the invading army, as *Singolegur* was thought untenable, and lay in their direct line of march.

DURGHOUTEE'S son, BEER NARAIN, made *Gurha* his residence ; and it continued to be the capital till the reign of when it was transferred to *Mundala*, which became the residence of his successors till the *Saugor* conquest, or usurpation in the year *Samvat* 1837, A. D. 1780. when *Jubulpore* became the seat of the local government, and has continued so ever since.

When the Rajpoot dynasty, if it may be so called, commenced in the person of JADOO RAE, the principality contained merely the district of *Gurha*, (No. 1,) which comprised seven hundred and fifty villages, and was bounded on the south by the *Nerbudda ;* the west and north by the *Heerun ;* and on the east by the *Gour* rivers. GOPAUL the tenth prince of that dynasty, extended his dominions over the districts of *Mandoogur*, (No. 2,) containing seven hundred and fifty villages. He built the town of *Gopaulpore*, and is said to have improved his country

greatly by rendering the roads secure to merchants and all kinds of travellers, whereas they had before been much infested by tigers, and other beasts of prey.

Pedigree of SAH GUJEE RAI.

SAH GUJEE RAI.

BHOPAL SINGH, ANOP SINGH, ABDOOD SINGH, MOHUN SINGH, BURJORE SINGH.

FUTTEH SINGH, HEMRAJ, JUGUT SINGH, INDERJEET.

LUCHMUN SINGH, TILOK SINGH.

VIKRAMAJIT.

N. B. A list of the *Gurha Mundala* rájas derived from an inscription translated by Captain FELL in the 15th Vol. of As. Res. page 437. has 47 in lieu of 48 names to SANGRAMA SA'H whose Son VI'RANA'RA'YANA was killed in a battle with AKBER'S troops. That list terminates with the reigning monarch HRIDAYE'SWARA in A. D. 1667. It differs immaterially from the present list.

II.—*Account of the Ruins and Site of old Mandaví in Raepur, and legend of* VIKRAMA'DITYA'S *Son in Cutch. By Lieut.* W. POSTANS, *Bombay Engineers.*

On the edge of the creek *(khárí)* which runs inland in a N. W. direction from *Mandaví* at the distance of about 2 miles from that *Bunder*, are to be traced the remains of a place of some extent called by the natives of the country *Raepur*, or *Old Mandaví*, (this last word signifies custom house.) They relate that *Raepur* was formerly the *Mandaví* of the Gulf of *Cutch*: the sea washed its walls and it carried on greater trade than *Mandaví* (or as it is styled in all official documents of the country) *Raepur* does at the present day. *Old Mandaví* is however now nothing more than a deserted and desolate spot, and with the exception of the foundations of its brick buildings, nothing remains to denote where a flourishing city is supposed to have once been. It is curious that the art of brick-making has either been lost or completely fallen into disuse, hence the natives use these ruins to provide bricks to assist in building the houses of neighbouring villages, and in digging for these the small copper coins have been found, which are known in *Cutch* as the **Ghadira pice* from the im-

* I annex a sketch of one of the most perfect impressions I have yet seen. I have in my possession 12 of these coins, some of which I found myself amongst the ruins of *Raepur*. The natives say they are often found after the rains when they are more easily distinguished from the stones, &c. which surround them, owing to the sand being whiter at that season—the antiquarian would no doubt be rewarded if he were to dig to some extent in this spot.

press they bear. The love for the marvellous amongst the natives has magnified the extent and importance of *Old Mandaví* to a city 2 coss in circumference, carrving on double the trade of the present and more modern port. I found the greatest visible extent of its ruins from E. to W. to be 200 paces, but as the *khárí* bounds them to the N. and W. the yearly freshes carry away some part of the foundations; so that from their present appearance little idea can be formed of the real extent of the place. In the absence of all historical record, as is usual with many places presenting a similar appearance in *Cutch*, a legend or legends is attached to it, and it is related to have been the consequence of a curse *(sirap)* denounced upon it by a holy mendicant (DHARMANÁTH), the founder of the sect of jogies called *Kanphatties*:—they have a temple said to be built in the time of RAO LÁKHÁ in the middle of the ruins: the village of *Raepur* on the opposite bank of the *khárí* is tributary to the same establishment. There is no reason to doubt that *Raepur* was formerly a place of trade and importance, the *khárí* from the sea to some distance above *Raepur* is of considerable width, never less than 800 yards, and in places I should think even more. It is by no means unusual for the sea to recede from places similarly situated, and the abandonment or destruction of the old port may either be attributed to this cause rendering it no longer available for trade, or it may be the effect of either earthquake or famine, to both of which calamities *Cutch* has at all periods been subjected.

Cutch above all places abounds in legends and traditions; the more marvellous the higher they are prized. The following as being connected with this ancient city of *Raepur*, and the impression in the *Ghaaira* coins* I have committed to paper for the amusement of the curious in such matters. For all the inconsistencies which may be observed therein, I beg leave to decline any responsibility; I merely profess to give a correct translation of the fable as it has been at various times related to me. As this legend also represents the destruction of *Raepur* by VIKRAMAJIT the son of INDRA, it is evident that it must have been rebuilt before DHARMANÁTH could have vented his malediction upon it. The native way of accounting for this is, that it *was* rebuilt, and that the coins are the work of a king GADDEH SINGH, who struck them in commemoration of the story of VIKRAMAJIT. It was during his, GADDEH SINGH'S, reign (about 450 years since) that the city of *Raepur* was again destroyed,—but

* The square copper coin sketched by Lieut. POSTANS has the effigy of a bull, not an ass: though it might be readily mistaken.—ED.

such are the absurdities and inconsistencies which mark these traditions, that it is difficult to know which is the most popular fable, since you can seldom hear the same story from two different persons: however this of VIKRAMAJIT is the best *authenticated* I have yet found on the subject.

Legend of VIRJI *the Son of* VIKRAMAJIT, *whose father was transformed into a donkey.*

The legend opens with INDRA, who is represented as amusing himself in the courts of paradise with the matching of four *Apsaras* (heavenly nymphs), his son VIKRAM being present at the entertainment,—one of the damsels was so surpassingly beautiful that she attracted the attention and as the sequel shews excited the admiration of the son, who after gazing for some time threw a small pebble at her as a token of his passion, and a hint not to be misunderstood. The pebble striking the nymph occasioned a slight deviation in her movements which INDRA observed, and ascertaining the cause was greatly incensed that his son should in his presence be guilty of so great a breach of decorum; he determined to inflict summary and severe punishment, so turning to his son he said, "Your conduct is unbecoming and disrespectful, the action of which you have been guilty in giving reins to the fierceness of your desire is more consistent with the properties of an ass than one of godlike origin; hear then the curse I denounce upon you—quit these realms and visit the earth in the form of an ass; there and in that degraded form to remain until the skin of the animal whose form you take shall be burnt, then you are released but not till then." Short time was allowed VIKRAM to prepare for his journey, he was at once precipitated to earth and alighted close to a potter who was employed in his vocation near the then populous and important city of *Raepur* (*Old Mandavi*). The potter amazed at this sudden accession to his wealth, after some time put the son of INDRA into his stables with his other beasts; but the first night the donkey speaking to the potter said, "go into the neighbouring city and demand the king's daughter for me in marriage." This miracle astonished the potter, but he obeyed the injunction, and proceeding to the kotwál of the city, communicated what had occurred. The kotwál disbelieving the story went to the potter's house to ascertain the fact; he heard the same words repeated and told the minister, who also having satisfied himself of the truth of the report, devised some means to acquaint the king; he in his turn heard the donkey speak, and wishing to avoid so very unpleasant a connection for his daughter said to the potter, If you will in one

night cause the walls of my city to become brass, the turrets silver, the gates gold, and collect all the milk in my province into one spot, I will give my daughter in marriage to this donkey. Satisfied in his own mind that his daughter was safe under this agreement he departed. No sooner had he left the place than the son of INDRA said to the potter, Place a chatty (earthen pot) of milk on either side of me, rub my tail with milk and mount me. The potter obeyed him and away they flew to the city. The potter was then directed to sprinkle the milk from the chatties on the walls and turrets ;—he did so, and they became brass and silver; with a switch of the donkey's tail the gates became gold, and all the milk in the province collected into one place. In the morning, great was the surprise of the king to find the task he had given and on which he had relied for the safety of his daughter so scrupulously fulfilled. He had no remedy therefore but to perform his promise, and the marriage rites of the princess with INDRA'S son in the shape of a donkey were duly solemnized. That night the bride with a confidential friend, a brahmin's daughter, awaited the coming of the bridegroom. The son of INDRA who had the power of appearing in mortal form (which power he only possessed during the night) came to the chamber where the damsels were in a form surpassing mortal beauty. The princess supposing some stranger had intruded himself ran away and hid herself in another apartment, but the brahmin's daughter remained. In short he revealed the secret of his divine origin, and the curse under which he suffered, to both the women, whom he took to wife, and in due time each became pregnant. The king astonished at the apparent apathy of his daughter, respecting the disgusting form of her husband, inquired of her and discovered the secret, resolved to emancipate his son-in-law from the curse, he one night seized and burnt the donkey's skin. The son of INDRA was immediately aware of the occurrence and directed his wives to take all the jewels and valuables they possessed and flee from the city to preserve their lives, for that he being released from his curse must return to his father INDRA, but that the city where they then were, would immediately become "*dattan*" (desolate and destroyed). The women fled and the city was destroyed, as VIKRAM the son of INDRA had foretold. The women journeyed towards Hindostan: on the road the brahmin's daughter was delivered of a son. Not having any means of providing for the infant she abandoned him in the jungle where a jackal suckled him with her young. The mother accompanying the princess proceeded until they arrived at a city where this latter was also delivered of a son whom she called

Vi'rji. In the course of time the child who had been abandoned, grew in stature but roamed in the forest like a wild beast, understanding only the language of the jackals, till one day he was observed by a horde of brinjarries who sent their men to surround and capture him. He travelled with these merchants, and nightly as the jackals howl around their camp, the brinjarries ask him what they say, he tells them to be on the alert, for from the cries of the jackals, plunderers are at hand. On this account the merchants regard him as their protector and call him Sakni or prophet. By chance these brinjarries stopt at the city in which resided Vi'rji with his mother and the mother of Sakni. Now the prince of this city made a practice of robbing all travellers who passed through it, and the brinjarries being possessed of much treasure, he sent his servants to pillage them, but owing to the cries of the jackals and the warnings of Sakni, their efforts were unavailing. Disappointed at their ill success the thieves determined on revenge, for which purpose they placed a *katturah* (drinking vessel) of gold in one of the traveller's bales, and accused them of having stolen it. The brinjarries, confident in their innocence, offered their property to be searched, promising that if the vessel was found amongst their bales, they would forfeit all to the men of the city. The *katturah* was found, and these latter aware of the power of Sakni demanded him to be given up. The merchants being helpless yielded him and proceeded on their journey; the mother of Sakni recognized her son and told the brothers of their relationship, they both set out upon their travels, Sakni telling Vi'rji that he must go towards the city of *Ujain;* that on the road he will arrive at a mighty river; that a dead body will float past him, on the arm of which will be a *tawid* (or charm), that if he possesses himself of this he will become king of *Ujain.* Vi'rji requests Sakni to accompany him, he does so, and Vi'rji having possessed himself of the charm as foretold by Sakni, they reach *Ujain* where they put up at the house of a potter, whose family were lamenting as for a dire calamity, on asking the reason of which they learn that the city of *Ujain* is possessed by a *Rakasa* (demon) by name *Agiah Betál,* who nightly devours the king of *Ujain;* that all men take it by turn to be king and rule for one day; the lot had now fallen on the potter, for which cause his family were thus afflicted. The brothers consoled the potter, and Vi'rji promises to supply his place. Vi'rji accordingly presents himself and with acclamations is proclaimed king of *Ujain;* he made Sakni his prime minister. At night armed with sword and shield he betook himself to his sleeping apartment, the *Agiah Betál*

as usual knocks at the door and demands admittance. VI'RJI opens the door and assisted by the power of the *táwid* conquers the demon, insisting on his quitting *Ujain* never to return. *Ujain* was thus relieved from a dire calamity. VI'RJI reigned in *Ujain* for many years and became a great monarch. His reign forms an epoch from which throughout *Gujrat* and *Hindostan*, the Hindu year is dated; thus the present A. D. 1837 is 1893 of *Vira* (*Vikrama ?*): he is recognized as the founder of the numerous castés which now exist; before his time there were only the four principal ones of *Brahmin*, *Kshatria*, *Waisya*, and *Sudra*.

III.—*Catalogue of Geological Specimens from Kemaon presented to the Asiatic Society. By Dr.* J. McCLELLAND.

Anxious that the structure of *Kemaon* should be brought as practically as possible to the notice of those who devote themselves to geology, I take the liberty to present to the Asiatic Society a duplicate collection of rock specimens, the counterpart of which is intended to be sent to the Geological Society of London. If this small collection be of no other utility, it may serve in some slight degree to elucidate the extensive collection of the rocks of the same province, formed by the late Captain HERBERT, and may assist some member of the Society in the task of arranging the vast accumulation of materials alluded to.

They are the specimens from which the mineral characters of the rocks of *Kemaon* were partly taken, so that if my work contains errors in the application of names, or if the substances to which certain names have therein been applied, be erroneously described; the members of the Society and all persons who have access to their museum will have it in their power to rectify my mistakes, which I have no doubt are numerous. On going hastily over the reinspection of the collection after nine months subsequent experience in Assam and the Cossiah mountains, I have myself been enabled in the catalogue to make some corrections applicable to my "Inquiries in *Kemaon*;" but there are other errors no doubt of still greater moment which neither my time nor my abilities enable me at present to point out; these may more readily occur to any member of the Society who will undertake an examination of this collection.

No. 1. Granite (Inq. Kem. 44*) as I have stated this rock to be stratified it becomes a matter of consequence to determine whether it be granite or not. I confess I begin myself to suspect it to be gneiss which has assumed the granitic form in particular spots. The whole range composed of this rock (changing in places into unquestionable gneiss) dips towards the *Himálaya*, presenting for the most part steep declivities in an opposite direction formed by the outgoing of the strata. In the lower strata the mica gives place to hornblende, forming an intermediate rock between gneiss and hornblende-slate as 5, 8, and 20†.

2. Specimen, of the granitic centres contained in the gneiss of Kalee Kemaon‡.

3. Gneiss of Kalee Kemaon.

4. Harder nodules which adhere to the surface of granitic masses.

5. Gneiss, with quartz and felspar imbedded in mica and hornblende, from Kalee Kemaon; it underlies the granitic rocks at Choura Pany, forming the southern foot of that mountain. This specimen belongs to variety *a*, Inq. Kem. 59.

6. Nodules of red felspar and hornblende adhering to the granitic centres of gneiss at Kalee Kemaon.

7. Mica-slate from beds of gneiss at Choura Pany.

8. The same containing hornblende.

9. Ferruginous slate from beds in gneiss and extending parallel with the strata. Inq. Kem. 52.

10, 11. Two interesting specimens shewing the transition between No. 5, and clay-slate variat. Inq. Kem. 59.

12. Felspar quartz with very little mica forming veins in the gneiss of Choura Pany.

13. Gneiss of Choura Pany (on the southern declivity of the mountain) passing into mica-slate nearly the same as 7.

14. Chlorit-slate with quartz from the southern part of Choura Pany. Inq. Kem. 60.

15. Ditto without quartz,

16. Porphyritic green stone. Inq. Kem. 61.

17. Described (Inq. Kem. 62.) as oldest gypsum from beds in mica-slate 7 and 8, but I doubt its being gypsum. Von Buch found beds of quartz in mica-slate just as this rock occurs: this specimen ought to be more carefully examined.

* Inq. Kem. 44—This abbreviation denotes the page referred to for further information in a work published in Calcutta, 1835, entitled, Inquiries in Kemaon, &c.

† These and similarly expressed numbers throughout the catalogue refer to specimens in the collection.

‡ When localities are mentioned, the map attached to the Inquiries in Kemaon may be referred to.

18. Specimen of a similar appearance from a similar geognos tion. Its specific gravity approaches that of gypsum more nearly tha of the last.

19. Mica-slate with chlorite, approaching closely to the character of clay-slate. It is interposed between 5 and the oldest clay-slate (24) and occurs extensively in Kalee Kemaon.

20. Hornblende-slate from the Ramessa valley.

21. Mica-slate occurring in beds of gneiss at Choura Pany, and with beds of quartz at Durgurrah.

22. Transition between mica-slate and clay-slate, Ponar valley.

23. Quartz containing mica (Inq. Kem. 64) described in mistake as oldest gypsum. It occurs in mica-slate at Durgurrah, and forms extensive beds in that rock. The mica-slate adjoining these beds for the distance of several miles on each side contains no quartz.

24. Clay-slate, oldest variety, (1 variat. Inq. Kem. 70.)

25. Old blue clay-slate, (2 variat. Inq. Kem. 70.)

26. Newest clay-slate, (3 variat. Inq. Kem. 71.)

27. A variety of No. 25 denominated roofing-slate: it is of superior quality and answers admirably for the peculiar purpose to which it is applied.

28. Clay-slate, (4 variat. Inq. Kem. 72.)

29. Transition slate? crystalline curved slaty structure with a pearly lustre, by which last it is supposed to be distinguished from 28, the lustre of which is glimmering and depends on specks of mica which are quite absent in this variety, the lustre of which depends on crystalline structure.

30. A somewhat crystalline bed occurring in the oldest clay-slate (24) on the N. E. foot of Choura Pany near the bed of the Lohoo river. One of the specimens since it was first examined has assumed quite a cupreous lustre, from which, as well as from its weight, I suspect it to contain a certain portion of copper. A repository of that metal may probably be found in the vicinity of the place from which this specimen was extracted.

31. Quartz from contemporaneous veins in clay-slate.

32. Transition between 25 and talc. It is described, perhaps erroneously, under the name of graphite or drawing slate. (Inq. Kem. 74 and 75.) It affords some of the principal repositories of copper one.

33. In further illustration of the transition between old blue slate and talc. In this specimen the approximation to clay-slate preponderates.

34. The same transition, but in this the substance approximates closely to serpentine. Inq. Kem. 133. Its lightness may however with propriety exclude it from that species.

35. Granular foliated limestone from beds in clay-slate, described as transition limestone. Inq. Kem. 85, 86, 87.

36. Primitive limestone. Inq. Kem. 75, structure in the great scale

No. 1. in consequence of straight layers of argillaceous matter which tified itate the calcareous parts; these are very minutely granular. It grapioses on clay-slate on the northern declivity of Takill.

37. Snow-white fine granular limestone.

38. Peach-blossom granular limestone. The granular foliated structure of both these rocks is obscure; 38 effervesces but slowly in acids, and a small portion appears to remain insoluble.

39. In this specimen both forms of the rock (38 and 37) alternate in layers.

40. Splintery hornstone from beds in 37 and 38.

41. Hornstone. Inq. Kem. 151.

42. Slate and limestone named for some reason for which I cannot now sufficiently account, aluminous slate and limestone. Inq. Kem. 87. Specimen from the Ramessa valley.

43. Another variety of the same rock from the Ponar valley.

44. Magnesian limestone containing mica and other insoluble matters.

45. Magnesian limestone.

46. Coarse magnesian limestone. The last three rocks belong to the Ponar valley. Inq. Kem. 90 to 92.

47. Steatitic sandstone, (Inq. Kem. 92,) fresh specimen.

48. Another specimen of the fresh rock.

49. The same partially weathered.

50. The same merely differing in color and rather more weathered.

51. Fully weathered and presenting the character of a fine sandstone in the state in which this peculiar rock forms the greater portion of the Suee mountain. See map.

52. The same as it often occurs in overlying masses corroded as in the specimen.

These instructive specimens from 47 to 52 merit serious attention. We see at Jeercoonie (vide map) a ridge of mountain formed of compact rock capable of scratching glass, and presenting some of the characters of Jade. We see masses of this rock continually separating and falling from the effects of the atmosphere, and that the masses thus detached from the original bed change rapidly from a compact and crystalline state to a loose fine-grained sandstone whose characters become permanent. Even the fresh specimens 47 and 48 since the time I procured them have underwent so great a change that they would now hardly be recognised by a person who saw them before. The sharp splinters have become soft and opaque, and the whole surface from an uniform sea-green and greenish yellow with waxy lustre has changed to a dull gray! To what extent have such changes taken place in nature? The Suee mountain adjoining Jeercoonie though now a huge uncomformable mass of fine sandstone without a trace of its former appearance must have originally consisted of this crystalline though apparently stratified rock! Inq. Kem. 92.

53. The same rock fresh but rapidly undergoing change.

54. Specimen of the same rock weathered and presenting the which it is spread over the surface of the country, as well as re[p]
in detached blocks and masses on the summits of clay-slate mountains*.

55. Rocks described, Inq. Kem. 106, 107, as transition limestone. It forms a ridge in the centre of Shore valley as well as most of the adjoining mountain summits. It appears to be stratified but much disturbed and broken. Brecciated specimens of the same.

57. Slaty variety.

58. Variegated brown and blue varieties of the same. The mineral characters of these limestones are sufficiently distinct from those described as primitive, and as this indication is confirmed by geognostic relations, I still adhere to the distinctions I have drawn between them, independent however of any theoretical views.

59. Overlying variety of the same. It is not very distinct in its mineral characters from the stratified rocks, and it may be supposed to have had its continuity merely separated from adjoining masses by the same set of causes as now occasion the corrosive effects on its surface. Inq. Kem. 107 and 108.

60. Compact dolomite. Inq. Kem. 109.

61. The same with chlorite and quartz preponderating.

62. With chlorite preponderating, the last two specimens being natural as well as local links between dolomite and chlorite slate at Belket.

63. Transition between compact dolomite and granular quartz with chlorite. Inq. Kem. 114.

64. Blue variety of the same consisting of distinct grains of quartz imbedded in chlorite more or less closely in different parts of the same specimen.

65. The same, but the grains of quartz are larger, more distinct and loosely aggregated as well as rounded, and altogether presenting the character of sandstone. These specimens were taken from the valley of Belket.

66. Peach-blossom variety of the same, from the Ramgunga valley at the bridge on the road between Petora and Almora, described, Inq. Kem. 115 as granular dolomite.

67. Another variety of the same, from the same situation. The oval grains of quartz appear to be in this specimen arranged so as to present their longest diameters to each other, giving the mass a fibrous structure and proving its chemical origin: attentive observation may detect the same structure in other specimens.

68. Another specimen from the same situation as the last.

69. Of the same nature as 66, 67 and 68, but in a state of decay and quite friable. In this form the rock is found in Goron valley 3,000 feet above the situation in which the other specimens were found.

* It is not always found *reposing* on clay-slate, but as is seen in many instances ascending from beneath that rock.

.ceous oolite, Inq. Kem. 117, composing a lofty range of moun-
.nd connected by an insensible transition with the rocks just enu-
..ted. It differs from any form of quartz rock I am acquainted with, in undergoing spontaneous decomposition.

71. The same slightly decomposed.

72. The same still more decomposed and earthy. The last 12 specimens, together with the series represented by 47 and 48, which are all connected by natural affinities, compose a large tract of the mountains of Kemaon; and my collection of specimens from the Abor mountains, several hundred miles to the eastward of Kemaon, is comprised of specimens which would seem to represent a continuation of the same rocks along the whole extent of the Himálaya in this direction. It would be interesting to compare these with the siliceous rocks of the cordilleras of the Andes, which also appear like the Kemaon siliceous rocks to be subject to rapid decay.

73. Protogine? I described this rock under the head of Granitine, Inq. in Kem. 124, and was led to believe the crystalline parts to be dolomite from the local connection which exists between this rock and limestone in all situations in which I have had an opportunity of observing it. Its connection with the ores of copper render it interesting.

74. A more characteristic specimen composed of large crystals.

75. A specimen of the same, but whose crystals are small and closely impacted together as is usual in this rock, the talc being collected in nests rather than uniformly disseminated.

76. Nearly the same as 74.

77. The same with a few columnar crystals of talc on one of its surfaces.

78. Another variety of the same found in small masses at the base of a lofty and abrupt calcareous mountain in Shore valley. The crystalline parts appear to be arragonite, but the matrix is talc.

79. Talcose limestone from Shore valley.

80. Another variety of a similar nature, but with the talcose parts decayed and extending longitudinally through the mass in an irregular concentric manner, so as to give it the appearance of a fossil wood, which similitude is further strengthened by the great length and cylindric shape of its masses, so that I was led to consider the first variety as satin spar, Inq. Kem. 125, and the other as a fossil wood, (Inq. Kem. 384;) but subsequent discoveries of both these minerals during my journey in Assam enable me to correct these errors.

81. Commonly slaty talc.

82. Another variety (spintery).

83. The form in which 81 enters into the composition of the talcose limestone.

84. The form in which talc enters into the composition of Protogine.

85. Rhomboidal crystals of talc.

86. Dolomite spar from nests between the talc and limestone in Shore valley.

87. Variegated slate. Inq. Kem. 128.

88. Newer argillaceous slate not variegated and found under distinct circumstances from the last. Inq. Kem. 130.

89. Greyish black brecciated serpentine from the bed of the Mahikali river. Inq. Kem. 131.

90. Noble serpentine. Inq. Kem. 134.

91. Ditto with veins of a quartzose appearance.

92. Coarser variety.

93. Green argillaceous slate from the vicinity of the serpentine. These rocks are found near the village of Gorajht on the way to Jula ghaut from Petora.

94. Older alpine limestone copper slate. Inq. Kem. 1838. The copper ore is contained between the slaty layers and fractures of the rock.

94½. Alpine limestone. There is another variety of this rock distinguished by its flat tabular masses forming thin beds, spread over other rocks rather than accumulated in masses of great depth, such as the rock represented by this specimen. I endeavoured to distinguish this variety farther by the peculiar form of some of its distinct concretions which resemble in shape small fishes. Inq. Kem. 140.

95. Magnesian limestone from Shore valley: structure slaty but crystalline and compact. Inq. Kem. 142.

96. The same, shewing the change to which it is subject by decomposition.

87. Shews that some layers are less disposed to decompose than others, and that the destructive causes operate as well tranversely with regard to the layers as laterally.

98. The rock completely altered, (Inq. Kem. 43) named earthy variety.

99. Vesicular limestone.

100. Porphyritic septarium. Inq. Kem. 148.

101. Vesicular limestone from the summit of several mountains.

102. Other specimens of the same from similar situations but somewhat decomposed.

103. Impressions of rhomboidal crystal in a basis undetermined, collected from amongst the talcose rocks and protogine in Shore valley.

104. Bituminous marlslate, valley of Belket. Inq. Kem. 154.

105. Calcareous grit stone from the northern declivity of the mountain that divides Belket from the plains.

106. Argillaceous sandstone. Inq. Kem. 156.

107. Amianthus from the junction of the talcose slate and limestone rocks in Shore valley.

108. Common quartz crystallized.

109. Greenstone contained in the newer limestone of Shore valley.

110. Hornblende—Belket.

111. Porphyry from the bed of the river at Burmdeo pass.

112. Transition between the newer argillaceous slates and granular crystalline rocks called steatitic sandstone.

113. Snow-white siliceous oolite from the Deary mountains.

114. Granular quartz from the valley of Bara but not collected in situ.

115. The same approaching the siliceous deposits already described in the catalogue, taken from the Deary mountains.

116. Matrix forming the contents of a vein in the primitive slate at Lohooghat. The vein is situated behind the rear guard.

117. Stalagmite from Takill.

118. Felspar from a vein in gneiss at Firker.

119. Quartz from a cotemporaneous bed of clay-slate at Lohooghat with a portion of the adjoining wall of the bed adhering to it.

120. Fragments of siliceous pebble, water-worn and subsequently fractured, found in the vein in clay-slate 116. Pebbles of this nature and boulders of small size intersected in various parts as if cut, rather than fractured, are common in this vein: the pieces of each pebble are found to lie adjacent to each other.

121. Transition between clay-slate and limestone, Shore valley.

Miscellaneous.

122. Steatitic sandstone approaching to the state of quartz, Ponar valley.

123. Felspar with a little quartz and mica from the veins in the gneiss of Choura Pany.

124. Veins and nests in protogine, Shore valley.

125. From the gravel in the bed of the river Ludhoo at Belket.

126, 127. From the same.

128. Porphyry from the bed of the river at Burmdeo Pass. Judging from the color of the precipices and the quantity of this rock found in the stream as well as of 111, a porphyry of the same color, I suspect that the great central masses composing the first range of mountains next the plains, consist of these rocks, and that the grit stones, both calcareous and argillaceous, are only comparatively superficial. The calcareous grit stone is a sedimentary deposite derived from the disturbance of calcareous rocks, probably from the mountains of limestone which are 30 miles within the sub-Himálayan ranges. The argillaceous grit stone, 106, which occupies a superincumbent position, from the quantity of mica and siliceous matter it contains, may be in like manner derived from the sedimentary deposites which took place on the upheavement of the primitive range intercepting the space between this deposite and the calcareous mountains that afforded the substratum. While these rocks themselves by subsequent

catastrophes may have been elevated from beneath the level of the present plains where they were originally deposited, to their present position which varies from three to five thousand feet above the ocean. This is suggested merely as an idea, the discoveries now in progress in this quarter conducted by CAUTLEY, FALCONER, BAKER and DURAND are likely to afford some rational grounds from which conclusions may be safely derived.

129. Shewing the contorted structure of the compact limestone in particular places. The specimen adduced is from the declivity of the Mahikali valley.

130. Claystone from the Ramessa valley.

131. Brecciated limestone from Shore valley.

132. Greenstone from Shore valley.

133. A single specimen found in one of the small rivulets near Lohooghat. It resembles porous lava and consists of grains of felspar imbedded in a pitch-like vesicular matrix.

134. An earthy globe found in the soil at Lohooghat: it has somewhat the appearance of a volcanic bomb.

Metallic Ores and their associates.

135. Talc and quartz of a curved slaty structure containing copper ore—Shore valley.

136. Another specimen.

137. Limestone talc and calcspar containing copper ore from the same locality.

138. Copper ore contained in a curved slaty structure of calcareous talcose and argillaceous nature. Geognostic position intermediate between clay-slate and limestone, valley of Borabice.

139. A very rich copper ore from Gungowly.

140. Another variety from the same mine.

141. Another specimen intermixed with rhomb spar.

142. Iron pyrites and rhomb spar.

143. Talc occurring with the copper ores.

144. Iron ore from the Ponar valley, repository in 5 and 20.

145. Another variety from the same situation.

146. Another species of iron ore from a repository in clay-slate near Dhee.

147. Iron mica forming the sides of the repository from which 145 was extracted.

Distinct series of Geological Specimens from the Abor or sub-Himálayan mountains in the 95° E. Long. and about 28° 15′ N. Lat. lying between the confluence of the Dihong and Dibong rivers in Upper Assam.

In the original catalogue of my Assam collection, I included 46 specimens of rocks brought to me from the Abor mountains. The

present series may not be very different as they were collected by the same persons and on the same occasion. In the almost total absence of any definite information regarding the structure of this portion of the Himálaya, it would be wrong to reject even the scanty intelligence which these specimens gathered by native collectors are calculated to afford. They were said to have been collected at an altitude of 1,500 feet on the first range of acclivities facing the valley, but this I doubt, it being more probable that the collectors contented themselves by selecting them from the beds of streams at the foot of the mountains.

No. 1. Is a claystone porphyry containing white crystals of felspar imbedded in a green earthy matrix.

2. The matrix is brown and the crystals of felspar reddish-brown, but in other respects it is the same as No. 1.

3. Small spheroids instead of angular crystals are imbedded: a similar basis to that of the two first specimens.

4. Veins of quartz penetrate the same substance. No. 4½, a variety with undulating veins of white felspar.

5. Porphyritic breccia consisting of angular fragments of the matrices of each of the former rocks: agglutinated specks of felspar also occur in it.

6. Serpentine and quartz.

7. Porphyritic breccia.

8. The same with veins of serpentine.

9.

10. Claystone of brown color.

11. Ditto greyish black.

12. Another variety.

14. Steatitic sandstone of the same nature as 47 and 48 of the Kemaon series.

15. Compact bluish-black limestone.

17. Quartzose sandstone similar to 70 of the Kemaon series.

18. Gneiss.

19. Other varieties of the same.

20. The same with hornblende.

23. Quartz with small vesicles from which felspar has been removed.

24.

25. Felspar.

26. Sandstone.

27. Quartz rock.

28. Decomposed green stone.

29. Decomposed gneiss, fine granular structure.

30. Calcareous grit stone, the same as 105, Kemaon series.

31. Coarse quartzose sandstone.

32. Magnesian limestone.

33. Serpentine and claystone forming a porphyritic structure as in 7.
34. Scoria found in the sands of the Brahmaputra.
35. Something of a similar nature but heavier.
36. A large crystal of garnet and mica received from Mr. BRUICE of Sadiyah, and said to be found in the Abor mountains.
37.
38.

Although these minerals have been merely submitted to a hasty inspection, yet it requires no great care or penetration to detect by their means an interesting affinity in the nature of the rock composing the sub-Himálayan ranges at very remote points along the line of their southern base. We find the porphyries of the Abor mountains not very different from those that are found in the bed of the Gogra at Burmdeo pass, 900 miles to the westward, vide 111, and 128 in the foregoing catalogue, which constitute the central masses of the outer range of the mountains of Kemaon, merely covered except on the inaccessible precipices, by sedimentary deposits of a very recent nature.

IV.—*Facsimiles of Ancient Inscriptions, lithographed by* JAMES PRINSEP, *Sec. As. Soc. &c.*

While engaged upon the engrossing object of the lát inscription, other documents of the same nature have been accumulating so fast upon my hands, that I shall have some difficulty in bringing up the arrear, even with a sacrifice of all the collateral information which should be sought from various sources, in illustration of the ancient records I have undertaken to preserve in an accessible shape through the convenient and facile process of lithography. My apology must be that once made public, these documents will be always open to discussion, and their utility will be felt at times and in cases which it is impossible to foresee. The task of systematically arranging and applying such materials may be safely left to the profound author of the long-expected "*Corpus inscriptionum Indicarum*"—to whom I proffer the fullest permission to extract all that can forward his object of filling up the history of India from numismatical and monumental data.

Following the random order of the plates themselves, I must first notice the

Inscription on a Stone Slab, No. 1 *of the Society's museum,* 52 *lines,* of which the five first lines are given as a specimen in Plate XXXII. The stone is marked at the side as having been "presented to the

society by CAVELLY VENKATA BORIA"—one of Colonel MACKENZIE'S native assistants in his antiquarian researches. It is stated to have been brought from "Kurgoade, S. S. 1723."

The character is the *Hala Kanada* or old Canarese, and it may be easily read or transcribed by means of the alphabet published in Plate XIII. which differs but little from the older form. MADHORAY, the librarian of the Sanskrit college, having examined a copy made for me by a young *Madras* pandit, has enabled me to give the following brief account of its contents, and might have done more; but, being all save the formulary at the commencement, in the Canarese language, I prefer sending a copy to *Madras* to be there completely examined; and, if found worthy, to be published in Dr. COLE'S valuable repository of the researches of the sister Society.

The inscription opens with an invocation to SIVA in his character of SWAYAMBHUNÁTH the self-existent lord, in two *aslokas*, of which the following is the transcript in the Devanágari character, by MADHORAY.

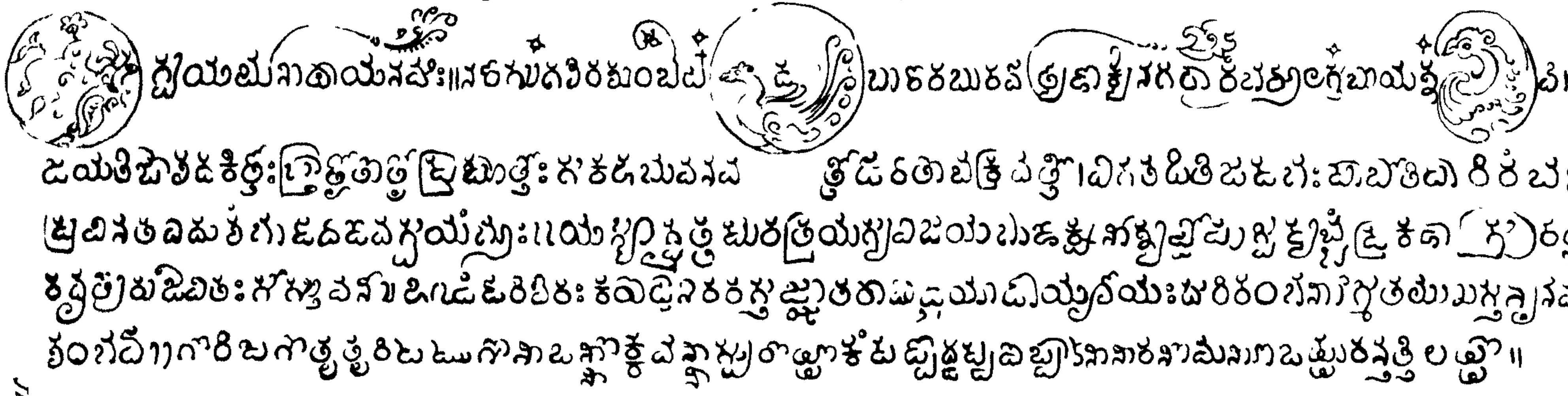
स्वयंभुनाथाय नमः नमस्तुंगशिरश्चुंविचंद्रचामरचारवे त्रैलोक्यनगरा
रंभ मूलस्तंभाय शंभवे॥ जयतिविशदकीर्त्तिः प्रार्थितार्थ प्रपूर्त्तिःसकल
भुवन वर्त्ती देवताचक्रवर्त्ती विगतदितिजदंभः पार्वतीपारिरंभः प्रवि
नत विदुषांभूर्देव देव. स्वयंभुः॥

"Salutation to SWAYAMBHUNA'TH, the acknowledged chief pillar of the three worlds from the beginning, whose lofty head has become beautiful being kissed by the moon. Victorious is he, manifest in glory, the fulfiller of all desires, the occupier of all worlds, sovereign of all gods, suppresser of the pride of the *daityas*, embracer of PA'RBATI, origin of sages, the god of gods, the self-existent!—"

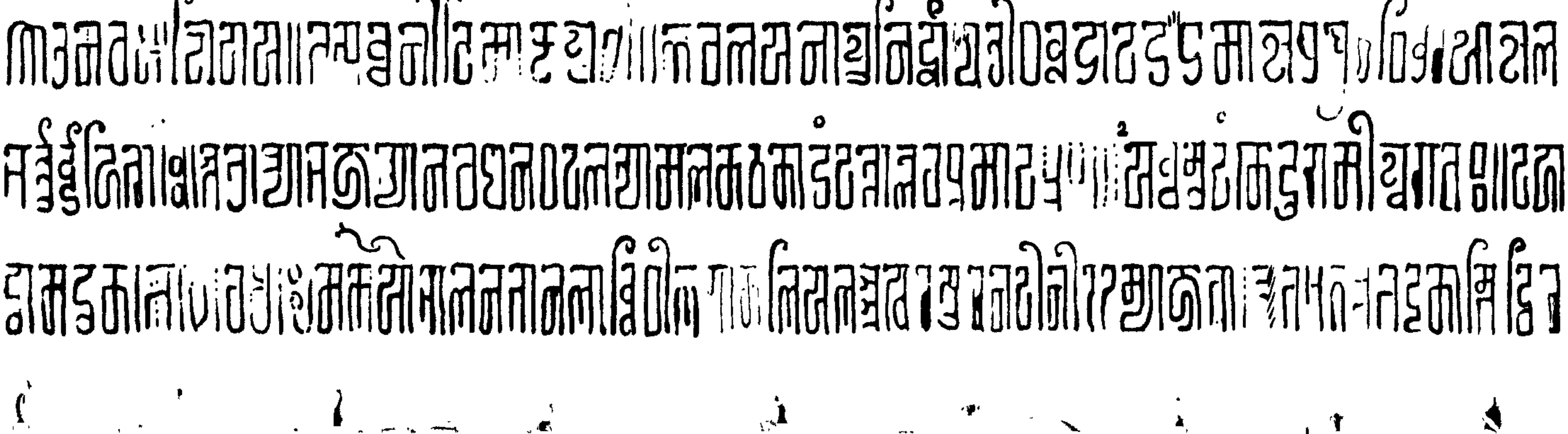
Then follow further praises of SAMBHU in prose and verse in the Canarese language, and a long eulogium of rája MACHMAL DEVA, who, in the month of *Maryasirsha* (November-December) of the *Sálivahana* year 909 (A. D. 987) on Monday, *amávasya*, or the day of conjunction during an eclipse of the sun, gave in perpetuity certain fertile lands, with the prescribed ceremonies for the service of some temple dedicated to SAMBHU. After this rája, his son, named BACHWAN, in the month of *Kartika* (October-November) of the *Machmal* year 110*, on Monday the day of the full moon, during its eclipse bestowed a further donation of fruitful fields and other lands on the same god with houses for the native priesthood.

* This implies the establishment of an era commencing with the *Machmal* dynasty, of which we have no particulars.

Commencement of the Mala Canara Inscription, No 1. As. Soc. Museum.



Commencement of an Inscription from Kalinjar, taken in facsimile by Lieut. Sale, Engineers



I am unable to trace either of these names in any list of peninsular dynasties, unless indeed BACHWAN be the same as BAKAN of the ADEVA RAJA line of *Telingana* sovereigns about midway between 800 and 1167, (see Useful Tables, page 120.) Mr. W. TAYLOR will probably be able to tell more about the family when he shall have finished his examination of the MACKENZIE records.

Inscription from Kalinjar, Pl. XXXII.

On the same page I have inserted a specimen (the two first lines) of an inscription, taken by Lieutenant SALE, of the engineers, in impression on cloth and paper, from a stone in the celebrated fort of *Kalinjar* in *Bundelkhund*, measuring 36 by 30 inches.

The ink is unfortunately so pale that it is difficult even to read what has been taken off; but independently of this the whole of the central part of the stone has been completely worn away, so that there would be no hopes in any case of effecting a perfect restoration of the document, which consists of 32 lines closely written: we must therefore be content to regard it as a sample of a peculiar variety of the Sanskrit character, differing principally from the modern Nágarí, or rather from the Nágarí of the second or Deva series of Canouj coins in its greater elongation. I have not thought it worth while to present an alphabet of the character, but the following equivalent of the lithographed specimen will enable the inexperienced to trace most of the letters.

ओं नमः शिवाय ॥ तत्पूर्व्वं नीति (भीत्याफणिपति) वलयेनाशुनिर्द्धा
र्य्यनीप चूड़ाचंद्रप्रमोद्यप्रचुरपिशुनया शैलभर्त्तुर्दुहित्रा। ध्वान्ते भा
न्त्या भजन्त्या नवघनपटलश्यामलं कंठकांडं दत्ताश्लेषप्रमोदः प्रमुदय
तु मुदं मेदुरामीश्वरोवः ॥ देहार्द्धामर्द्धका.....कतीयो भालनेत्रा
नलार्द्धं पीन..लियेलन्मुखरसुरनदीनीरम्या जलान्त। .....तदूका
न्तिद्विरददृतिदृढाच्छादनव्यक्ततोतः शंभुर्भुपाखिकुटप्रकरपरिवृतःपातु
(भूपालका) न्तं ॥

Translation.

"Praise to SIVA: may he who in dalliance with the daughter of *Saila Bharta* (the Himálaya) removed the moon-ornament from his forehead that she might not be frightened at the sight of the king of snakes wound round his wrist,—on whose blue neck PA'RBATI' hanging like a bright cloud on the azure sky, tasted supreme pleasure,—give unto you gratification.

"May Sambhu protect the lords of the earth—he the half male and half female—whose third eye is half fire, and half moon—upon whom the envious Ganga' (abusing his preference for Pa'rbati'), mounted upon his head—whose skin on half his body is as an elephant's, and beauteous on the other—surrounded (as a necklace) with men's bones."

Had it not been for the poetical metre in which this is written, the स्रग्धरा छन्दः *Sragdhara chhanda* consisting of four *charanas* of twenty-one syllables, thus :—

— — — — ᴗ — — ᴗ ᴗ ᴗ ᴗ ᴗ ᴗ — — ᴗ — — ᴗ — —

it would have been next to impossible to have made out even what has been here restored. Perhaps a few other verses might be made out in the same manner from the very faint traces of letters on the cloth, but it would be a grievous waste of time. If Lieut. Sale will favor me with another impression of the concluding lines taken with black printer's ink, there will be no difficulty in reading that portion, which is clear enough, and which probably contains the cream of the story, the donor's name and the date.

I extract Lieutenant Sale's account of the inscription from his private letter of April last, hoping he will pardon the delay in its notice.

"The inscription was found at the entrance of the temple of *Mahádeo* on the hill of *Kalinjar ;* cut on a black marble slab. Parts of it are effaced and it has been difficult to get clear impressions of the rest in consequence of some attempts made by individuals on former occasions who have clumsily destroyed the letters.

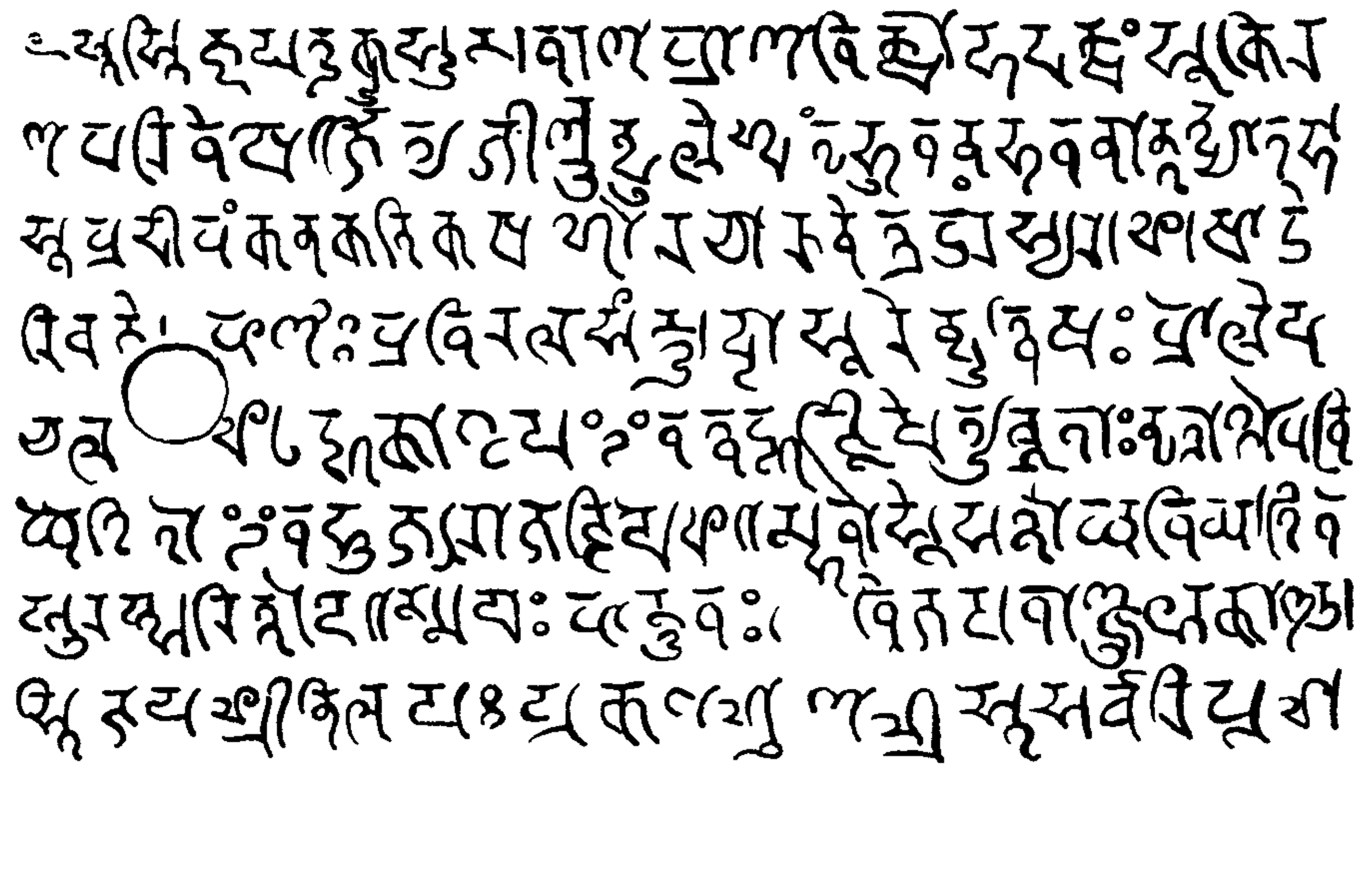
"The date of the inscription (on the authority of the local pandits ?) appears to be only about 700 years back ; and it contains the name of a certain rája Parmálik*. The following tradition of the cause of *Kalinjar* being fortified was related to me by the resident bráhmans.

"During the time of the *Satyayuga*, a rája named Krim Khote who was afflicted with a cutaneous disorder, was led by his delight in hunting to form a party to the adjacent hills. Being much fatigued he bathed in a tank fed by a natural spring called the *Budhi Budha*, situated at the top of the hill of *Kalinjar*. To hide from public view the disgusting appearance his skin presented, he used to wear a dress over his entire person made of the skin of the *sambre* deer. On retiring to his private apartments he took off this covering, and was

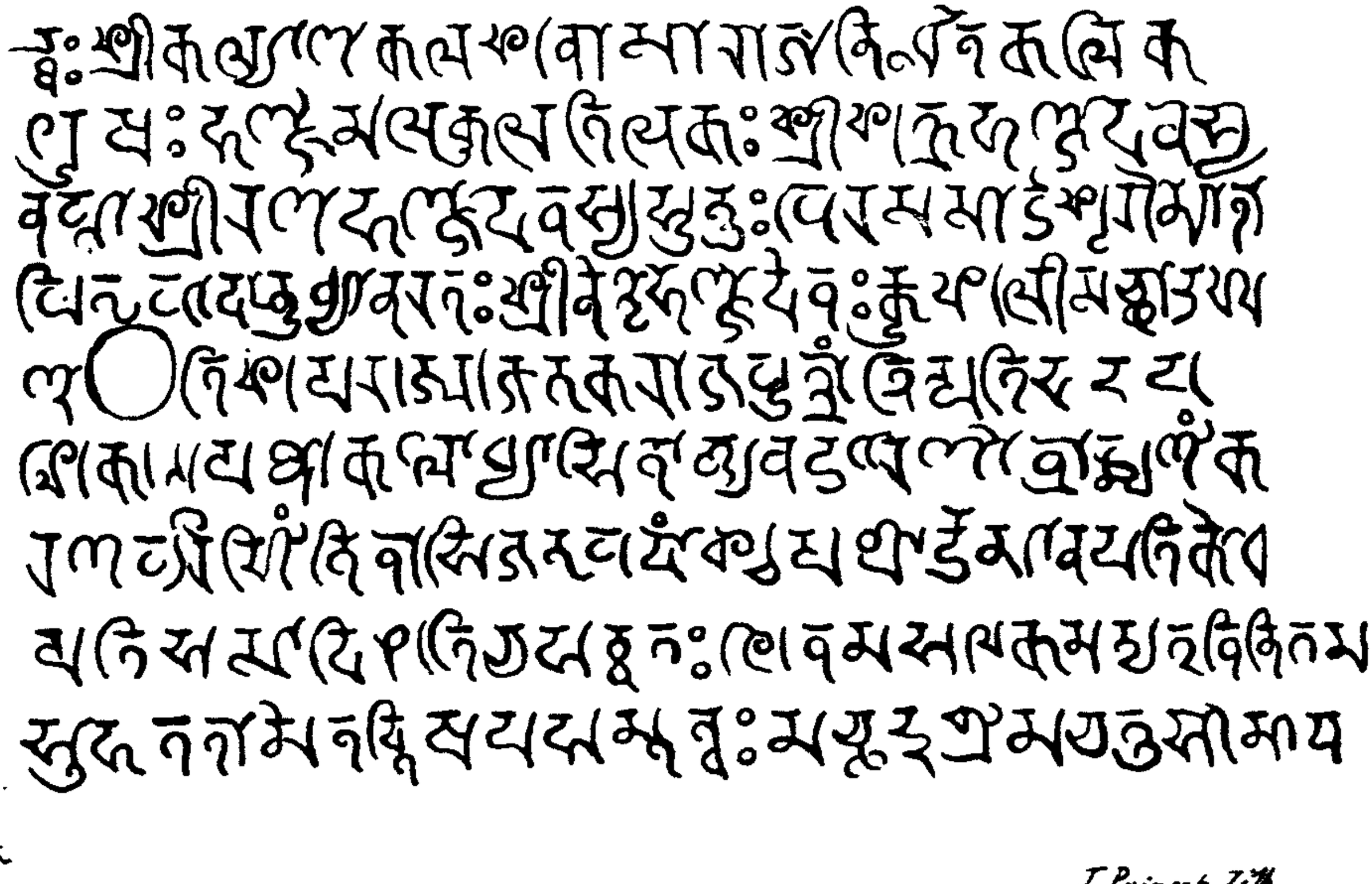
* This must undoubtedly be the *Milleki* rája of *Kalinjar* mentioned by the Musalman historians as having been defeated by the *Delhi* monarch (Mahmud bin Altamsh) in A. D. 1246.—See Useful Tables, p. 125.—J. P.

FACSIMILE OF INSCRIPTION ON GOOMSUR PLATES

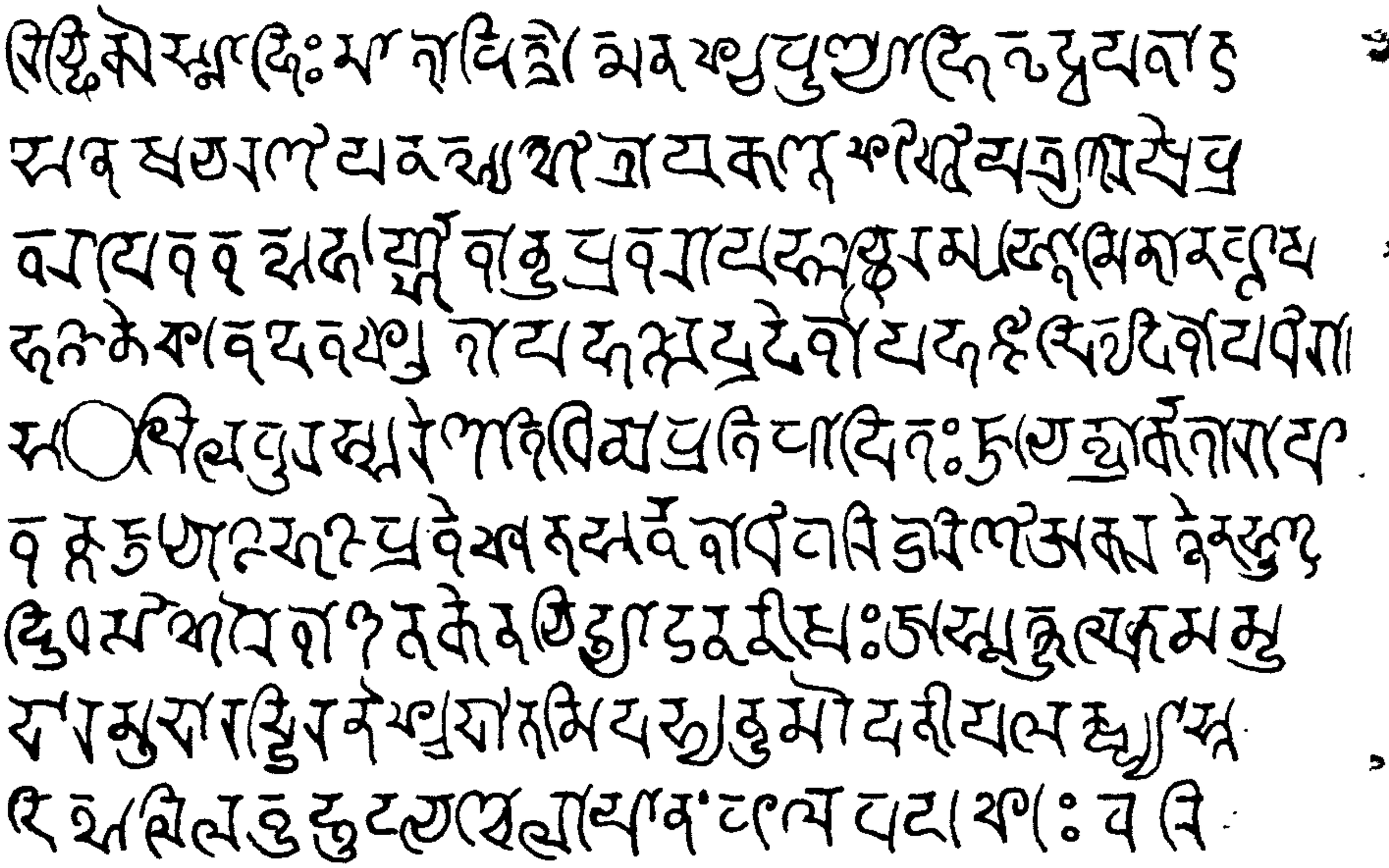
Inner side of first Copperplate.



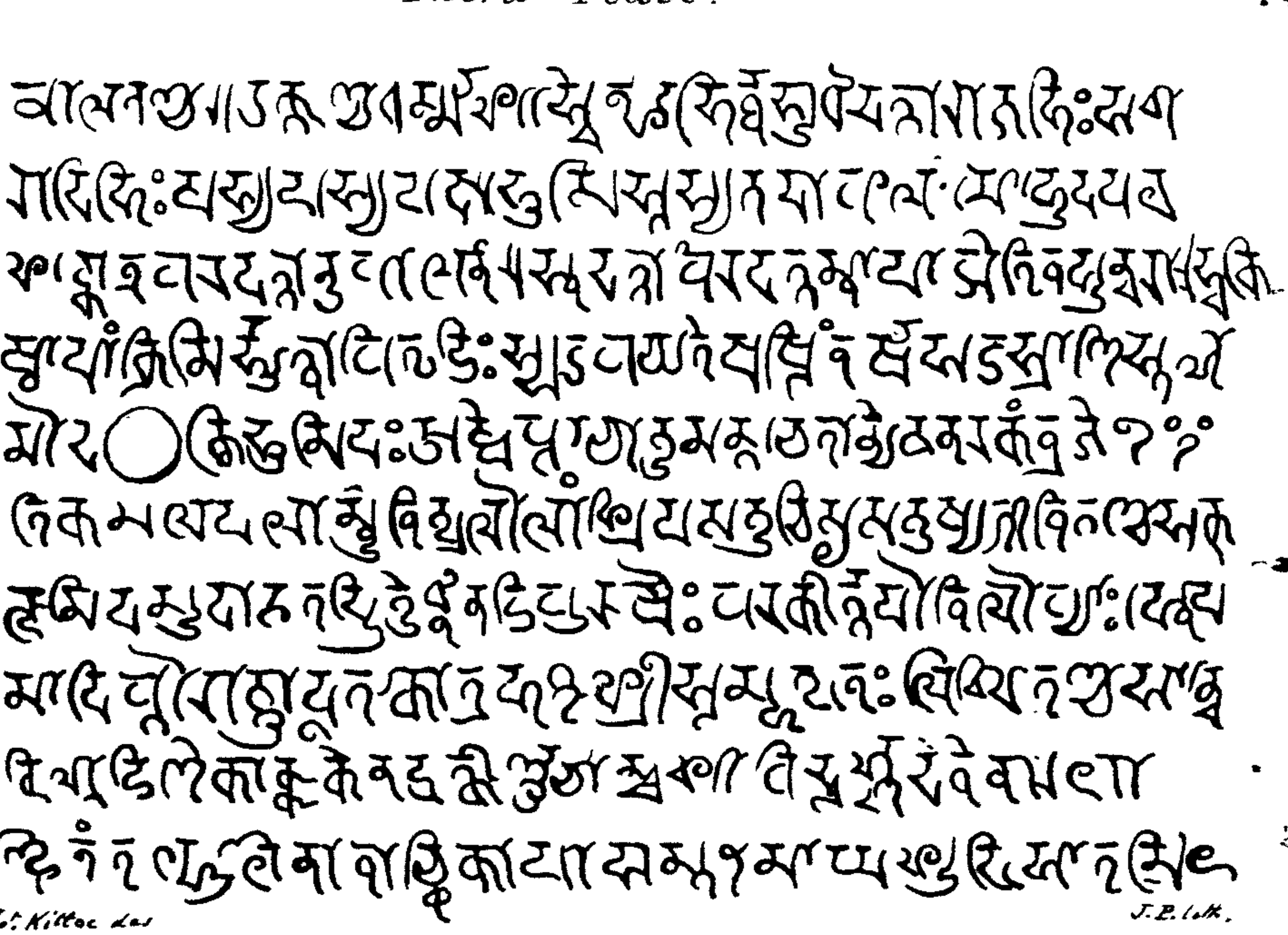
Second Plate.



Lieut M. Kittoe des. *J. Prinsep Lith.*



Third Plate.



much astonished to find that he was healed. Being inclined to attribute this to the effects of the water in which he had lately bathed, he directed lepers and other diseased persons to wash in the tank and they also were healed. As the native legends generally terminate, he assembled the bráhmans and pandits of his own and the neighbouring states, and they declared that this water was holy, and that he ought to erect temples in the neighbourhood. He also built himself a palace in the hill and commenced fortifying its circuit as a protection.

"Round the tank are still seen numerous habitations for *gosains*, now deserted; and the tank has been squared and steps formed leading to the water's edge. I was told with great seriousness that no bottom had been ever discovered to it! I made great search among the ruins of the palace for some inscriptions but was not rewarded, and my inquiries were equally fruitless. The *Nilkant* and temple of *Mahádeo*, are of a subsequent date, and the inscription, I believe, records the cause of its erection.

"In my rambles through *Bundelkhand* this winter I passed one or two places formerly of religious note, but found no inscriptions. GANESHA is the favorite deity of the *Boondelas*."

Inscription on a copperplate grant from Gumsar. Pl. XXXIII.

For this specimen, interesting from the rude country whence it comes, I am indebted to the active inquiry of Lieutenant M. KITTOE, whose regiment was lately marched to *Cuttack*, to aid in quelling the unfortunate disturbances in that district.

Lieutenant KITTOE gives this further information of their discovery.

"The plates were found at *Gumsar* amongst other effects belonging to the late *ráj* and came into the possession of the commissioner (the late Mr. STEVENSON, Madras Civ. Ser.); who, supposing them to be a document connected with the state, sent them to *Pooree*, hoping to get them deciphered. None of the *Pooree* pandits were able to make out the character. They were eventually sent to me when I took the facsimile now forwarded. The *Bhanja* rájas are branches of the *Moharbanjí* family who again claim descent from the royal house of *Chitor*. They are of the *Suryavansi* tribe of Rájpúts. *Gumsar* and *Daspalla* were formerly held by the *Boad* rája, but the states were divided 12 or 13 generations back; since which they have remained separate. There are several traditions regarding the origin of the title of *Bhanj** which are too absurd to commit to paper. The grant

* *Bhanja* in Sanskrit signifies 'broken.' It may apply to the country which is mountainous and broken up by numerous ravines. The title of the goddess mentioned in the inscription somewhat supports this.

recorded is evidently that of one of these hill chieftains. I have tried in vain to get a pedigree of the *Gumsar* chiefs. I have one of my friend the *Daspalla* rája, who is a near relative of the *Boad* and *Gumsar* rájas."

The *Madras* journal, for July, contains a very valuable paper on the *Khonds* of the *Gumsar* mountains, compiled by the Rev. W. TAYLOR from documents collected by Mr. STEVENSON and Dr. MAXWELL, which will be read with much interest by all who have an opportunity of seeing Dr. COLE's excellent periodical.—We only regret the impossibility of transferring to our pages (malgré the late discussions condemnatory of such literary piracy) some extracts from the philological materials so carefully analyzed by Mr. TAYLOR, and from the no less curious account of the customs (some dreadfully barbarous) prevalent among this hill tribe. Their title of '*Khond*' is identified with '*Goand*' on the one hand through the Hindustání; while the native mode of writing the name '*coḍulu*' or '*coḍuru*' assimilates, in Mr. TAYLOR's opinion, with '*coḍ.gu*,' the correct name of the *Coorg* mountaineers. The dialect is a mixture of Sanskrit, *Uriya* and *Tamil*, which would be still generally intelligible to a *Coorg*.

Among the mountain castes enumerated in page 41, I find no name resembling BHANJA; which so far confirms the extraneous origin of the ruling power mentioned above. Allusion is however made to a report by Mr. RUSSELL, the present commissioner, which will probably embrace all the historical and political connections of the state, not comprehended in Mr. TAYLOR's notice.

As connected with this subject it would perhaps be more correct to transfer the *Gumsar* plates to the sister presidency for elucidation, but on the other hand we may advance a fair claim to them on the score of the character being of our branch of the Sanskrit family: and therefore more easily read here. It is in fact nearly the same as the writing of the *Bhubanèswar* inscriptions, the well known Bengálí or Gaur alphabet of the tenth century; but, written in a cramped hand and cut by an unskilful engraver, it has been no easy task, notwithstanding the perfect accuracy of Lieutenant KITTOR's copy, to convert the whole into a context legible by the pandits. To KAMALA'KÁNTA belongs the credit of restoring the version as given below in the modern character, and the translation subjoined is made by myself under his dictation. There is a passage towards the conclusion which he expresses himself unable to interpret; supposing it to refer to some local era with which he is unacquainted.

Transcript of the Gumsar Copperplates.

स्वस्ति जयतु कुसुमवाण प्राण विक्षोभदक्षं स्वकिरणपरिवेषैर्जनचकोरेन्दु लेखं। त्रिभुवनभवनान्तर्ध्वांतभास्वत् प्रदीपं कनकनिकषभासं चारुनेत्रंहरस्य १ श्रेयाहेरिव तैः फणैः प्रविलसन्तो भासुरेन्दुत्विषः प्रालेयाचलशृङ्ग कोटयर्इव त्वद्वाञ्छि येभ्युदूताः। छत्वायैव विपातिताश्च भुजा राजद्विमा ग्राम्भवाः आसन्नाघविपातिनः सुरसरित्तोयोर्म्मयः पान्तु वः २॥ विजयवा ह्वलिकास्तुस्वस्ति जयश्रीनिलयः——गुणग्रस्तसर्वरिपुगर्वः श्रीकल्याणकल शनामा राजा निर्धूतकलिकलुषः भङ्गमजकुलतिलकः श्रीशुभङ्गदेवस्य नप्ता श्रीरणभङ्गदेवस्य सूनुः परमेश्वरमातापितृपादानुध्यानरतः श्रीनेट भङ्गदेवः कुशली मच्छोद्रग्राममतिशयराजवाकटकराजपुरुषान् द द य श्रेकामये प्राक् अध्यासिताभ्युपद्रविणं ब्राह्मणं करणार्थ्यश्रिंनिवासिजन पदांश्चयथार्हंमानयतिसेधयति समादिशति च सर्वतः श्रिवंसकलमन्यत विहितमस्तु भूतानामेतत् विषयसंबद्धःमच्छद्रग्रामःचतुःसीमापरिक्षित्ति कोस्माभिः मातापित्रोर्मनसश्च पुण्याभिवृद्धये वाजसनेयचरणाय वात्स्य गोत्राय काण्वशाखायत्रिप्रवराय वत्सभर्गवाणप्रवराय भद्रेश्वरनामेरता नंदाय भद्रकेशवदेवसुताय भंजाद्रिदेवाय भंजादित्यदेवाय धरासलिल पुरःसरेण विधिना प्रतिपादितः आचंद्रार्कतारायावत् आचंद्रभप्रवेशं सबाधः परिहरणआकररत्नेन भंजाद्रिधर्मगौरवात् केनचित् नोजननीयः अस्मत्कुलउदारमुदार द्विरद सदानमिव ह्यनुमोदनीयं लक्ष्म्यास्तडित् सलिलतुल्यचंचलायातत् पालययशःपरिपालनंच राजकुलधर्मशास्त्रं बहुभिर्बहुधा दत्ता राजभिःसगरादिभिः यस्य यस्य यदा भूमिः तस्य तस्य तदा फलं समुदयतु स्वदत्तां परदत्तामनुपालनंच स्वदत्तांपरदत्तांच य हरंति वसुंधरां स विष्ठायां कृमिर्भूत्वा पितृभिः तदुपाश्रुते षष्टिवर्षसह स्राणि स्वर्गे मोदति भूमिदः उक्त्वा चानुमंताच तान्येव नरकं वसेत् इतिकमलदलांबुलोलां श्रियमनुचिंतिंव मनुष्यचरितंच इत्थमिदमुदा हरंति नहि पुरुषैः परकीर्त्तयो विलोप्याः स्वयमादिशो राजा दूतकोच

भटः श्रीसंवत् पुनः लिखितंच सान्धिविग्रहीकाकाक्केन तदूत्कीर्णचांद्र
श्रालिदुर्गदेवेन लिखितं न खगुलिकावाक्किकायाः संवत्। माघशुदिसा
तमित्।

Translation (as explained by KAMALÁKÁNTA VIDYÁLANKÁR).

"Glory to HARA *(Siva)* whose third eye, irresistible as the flowery shaft of KA'MA, filling with its bright rays the sphere of which the sun diminishes the splendour of the moon (the *tilak*-mark) on his forehead—the beauteous lamp of the three worlds, his habitation, pure as the streak of refined gold on the touchstone!

May you be purified by the water of Gangá whose waves are set in motion by the hoods of Sesnág*, and rise into eminences like the snowy peaks of *Prahleyachala (Himálaya)*, heaving like an arm up and down, powerful as a train of elephants in striking down the sins of men.

He who has brought under subjection many countries and accumulated treasures and fame, who by the force of his virtues has overcome his enemies the rája named KALYA'NA KULASA, who has banished the sins of the *Kali-yuga*, the very *tilak* (or sectarial symbol) of the *Bhanja-malla* family, grandson of SHATRA BHANJA DEVA, son of RANA BHANJÀ,—who reverences his parents as gods, who is otherwise named SRI' NETRI BHANJA, calls upon all his relatives and descendants to note his gift for the promotion of his parents and his own virtue—to be held in respect by all the inhabitants thereof—of the *Machhodarí* village contained within its four boundaries, to the well versed in the shástras—the very humble—bráhman of the *Karniparipanga* caste—one of the branches of the *Yajur veda*,—of the tribe of *Vatsya muni*, which counts the illustrious names of *Kana, Sambu, Patra, Dharasha, Pravaraya, Pivaratsa, Irah, Nanda, Pravaraya*,—to BHANDRESWARA (so called)—of contented mind, son of BHAONAL KESAVA DEVA,—resembling the god of the *Bhanja* mountain (*Bhanjáditya deva*) to him with the proper ceremonies of water, &c. we have given.

As long as the sun, the moon, and the planets shall perform their courses in the heavens, so long shall this grant remain undisturbed, and my posterity shall respect it, and my reputation shall continue.

It is written in the *Rája Dharma Sástra*; 'SAGARA rája in his days gave grants, the merit of which accrue to his successors if they hold them sacred.' Whoever may have given the land, he who disturbs the possession thereof, he and all his ancestors shall become loathsome maggots in dung. The bestower of land lives for 60,000 years in heaven, but he who resumes it as many years in hell remains.—As in *Kámala* leaves a drop of water floats, so is wealth and so (variable) is man's inclination, but fame endureth for ever. The rája himself has ordained, and all his minstrels

* The Ganges is threefold, part in heaven, part on earth, and part in *Pátála*—the earth is sustained by one of the 1000 hoods of the great snake, the remainder lying at rest in the inferior Gangá, impart the observed sparkling tremor to its waves.

shall proclaim it,—his minister of peace and war KAKKAKA wrote this. CHANDRA SALI, commander of the fort had it engraved. *Nalgullika vacchikáyá Samvat* 1 (?) *Mágh sudi sattime,* (on the seventh day of the bright half of the month of *Mágha,)* in the year one (?) of the *Nalgulli* era."

Gaya Cave Inscriptions.

The subject of *Gaya* antiquities is by no means exhausted, notwithstanding the labours of WILKINS and HAMILTON.—Mr. HATHORNE to whom I was indebted for the inscriptions from *Buddha Gaya* published in the last volume of my journal, (page 657),—has now at my request favored me with a fresh series of impressions from the *Caves* in the neighbourhood of the same place, taken off with care and success by his native employé, since his removal to the judicial charge of another district, (*Cuttack*). As the instructions were to bring away impressions of all that were to be found, the collection includes some already known and published, particularly the long inscription translated by WILKINS in the first volume of the As. Res. Nevertheless the engraving accompanying his version is so wretchedly executed that I think it worth while to lithograph that inscription again from the present impression, as a model of the form of the letters cannot but prove useful, especially since in some slight degree they differ from the *Gujerat* alphabet as well as from that of Mr. WATHEN's plates.

There are three other smaller inscriptions from various parts of the *Caves* in the same character and relating to the same parties, namely SÁRDU'LA VARMA, and ANANTA VARMA. None of these seem to have met the eye of Mr. HARINGTON, as they are not alluded to in his account of the caves, which I here extract from the same volume.

"The hill, or rather rock, from which the cavern is dug lies about 14 miles north of the ancient city of *Gaya,* and seems to be one of the south-eastern hills of the chain of mountains called by RENNEL *Caramshah,* both being a short distance to the west of *Phulgo.* It is now distinguished by the name of *Nágárjuní;* but this may perhaps be a modern appellation; no mention of it being made in the inscription*. Its texture is a kind of granite†, called by the Mohammedan natives *Sang-khárch,* which composes the whole rock of a moderate height, very craggy, and uneven, and steep in its ascent.

"The cave is situated on the southern declivity about two-thirds from the summit: a tree immediately before it prevents its being seen from the

* The converse proves to be the fact, the name is that of a celebrated Buddhist patriarch, and was doubtless given to the caves, then occupied by priests of that persuasion, long before the *Sárdúla* inscription was cut.—See below.

† There is a soft compact basalt which is cut into ornaments and sculptured images for sale; I had understood the caves to be cut in this substance, but I cannot positively assert it.

bottom. It has only one narrow entrance, from the south, two feet and a half in breadth, six feet high and of thickness equal. This leads to a room of an oval form, with a vaulted roof, which I measured twice, and found to be forty-four feet in length from east to west, eighteen feet and a half in breadth, and ten feet and and a quarter in height at the centre.

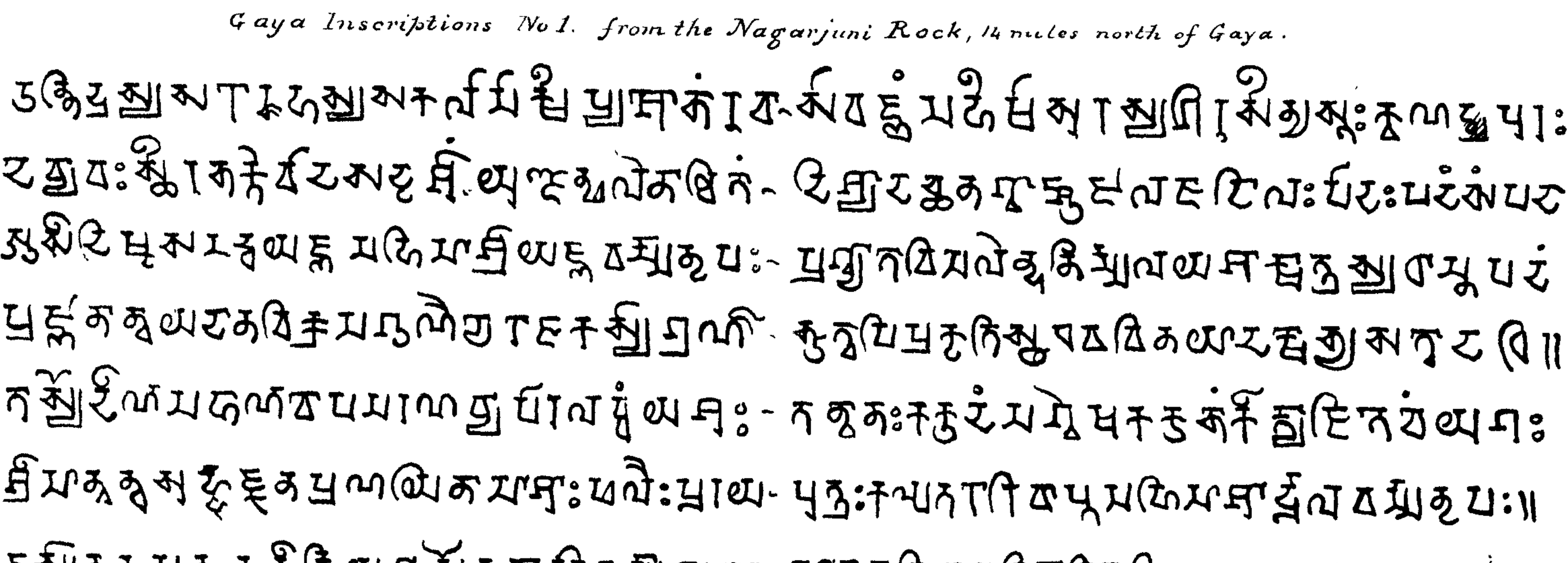
"This immense cavity is dug entirely out of the solid rock, and is exceedingly well polished, but without any ornament. The same stone extends much farther than the excavated part, on each side of it, and is altogether I imagine full a hundred feet in length.....There are two inscriptions, one on each side of the entrance, impressions of both which my *Munshí* took off in the course of three days with much trouble, and sufficient accuracy to enable Mr. WILKINS to understand and explain the whole of one:—the other which consists only of *one line* is unfortunately of a different character and remains still unintelligible."

Mr. HARINGTON's scrutiny must evidently have been of a very cursory nature, although he visited the place in company with Sir WILLIAM JONES himself; for the numerous other chambers alluded to in the tickets of the impressions now received are not even hinted at, and instead of two inscriptions I am now able to lay before the reader no less than twenty-three from the *Núgárjuní*, the *Karn chuhpár*, and the *Haftkhúneh* caves; as they are entitled in the Persian munshí's labels.

No. 1 Of the list (plate XXXIV.) is WILKINS' inscription, the same which instructed us in the reading of the secondary character of the *Allahabad* pillar, &c. The following is the modern transcript, in which I am able to fill up the name of the village, *Dandí* (or it may be *Pandí*), settled in endowment upon the priests by ANANTA VARMA.

उन्निद्रस्य सरोरुहस्य सकलामाक्षिप्य शोभां रुचा सावज्ञं महिषासुर
स्य शिरसि न्यस्तः क्वणन्नूपुरः देव्या वःस्थिरभक्तिवादसदृशायुञ्जन्फलेना
खिलां दिश्यादङ्घ्रिनखांशुजालजटिलः पादः पदं संपदां १ आसीदिष्ठसु
राङ्कयज्ञमहिमा श्रीयज्ञवर्म्मा नृपः प्रख्यातो विमलेन्दुनिर्म्मलयशाः क्षात्र
स्यधाम्नः पदं। प्रज्ञानान्वयदानविक्रमगुणो चेराजकस्याग्रणीः भूत्वापि प्रश्च
तिस्थएव विनयादक्षोभसत्वोदधिः २ तस्योर्ज्जितमहार्णवोपमरणव्यापार
लब्धं यशः तन्वानः ककुदं मखेषु ककुभं कीर्त्यार्जिनैवंजसाः। श्रीमान्बन्धु
सुहृज्जनप्रणयिनामाशाः फलैः पूरयन् पुत्रः कल्पतरोरिवास्यमहिमा श्री
दूषवर्म्मान्दपः ३ तस्यानन्तमनंतकीर्त्तियशसोनन्तादिवर्म्माख्यया ख्यातना

Gaya Inscriptions No 1. from the Nagarjuni Rock, 14 miles north of Gaya.



Prinsep 4th from an inked impression of the original

हितभक्तिभावितधिया पुत्रेण पूतात्मना आसूर्य्यक्षितिचन्द्रतारकमिदं पु
ण्यास्पदं वाञ्छता विन्यस्ताश्रितविन्ध्यभूधरगुहामाश्रित्यकात्यायनी ४
धातास्मोमलपङ्कदोषममलैर्मोहानदैरम्बुभिः व्याधूतोपवनप्रियङ्गुवकुलै
रामोदितं वायुभिः कल्पान्तावधिभोग्यमच्छशिखरिच्छायावृतार्क्षद्यु
तिंदान्दीग्राममनल्पभोगविभवं रम्यं भवान्यै ददौ ५ ।

For the translation, instead of adopting WILKINS' words, I present if anything a more literal rendering by SA'RODA'PRASAD CHAKRAVARTI, a boy of the Sanskrit college, who had studied in the English class lately abolished. I do this to shew how useful the combination of Sanskrit and English grammatically studied by these young men might have been made both to Europeans and to their own country*.

Translation.

"May the foot of *Devi* make your fortunes prosperous and successful in proportion to your firm devotedness to her; (which foot) reproaching all the splendour of the well-blown waterlily by its own beauty, was put with contempt on the head of MAHISHA'SURA (a daitya) (and which) wears a sonorous *nepur*†, and seems fringed with matted hairs from the bright rays of its nails (and which) is the spring of all wealth.

There was a celebrated rája named YAJNA VARMA, who became very great for his performing a desired ceremony named *Surabha*; whose

* The same boy assisted Captain TROYER in the translation of many Sanskrit class books. It does certainly appear a strange act of inconsistency that the very party in the education committee who have deprecated all other but English instruction should have abolished English tuition in the Sanskrit division of the college, where it had been introduced in the face of many prejudices and difficulties by Mr. WILSON! It would not be fair to suppose that by depriving the poor Sanskrit students of this source of utility and of future employment, in addition to taking away their scholarship stipends, an additional but secret shaft was pierced to undermine the fabric which it was thought imprudent to overthrow by direct abolition; yet surely such must be the effect; and the opportunity will soon be totally lost of transferring into the classical, the pervading, language of India, any share of the learning of the west. No more convincing example of the fallacy of trusting only to a vernacular which varies in every district of this vast country, can be adduced, than the case of the astronomical discussion now carrying on by the pandits of *Bhopal* and *Puna*.—The first treatises of Mr. WILKINSON's pandits were utterly unintelligible here from the admixture of Maratha or the *Bhásha* of Central India, whereas by confining themselves to the classical tongue, their arguments are now calculated to carry conviction from one end of India to the other.

† A tinkling ornament for the feet.

fame was pure like the spotless moon; who was a tabernacle of the spirit of a true kshetri, possessed of all the good qualities of wisdom, good family, charitableness and courage; who was the first of all princes in honor and respect, who was the sea of undaunted power; and although possessed of all these qualities he was through humility never out of his own good disposition.

He had a prosperous son of the name of SA'RDU'LA VARMA who diffused like the great ocean his well known fame gained in war through every part of the world; who gratified the expectations of his friends, intimates and kinsmen, whose dignity resembled the *Kalpataru* (a sacred tree which affords every thing desired): through his son, called ANANTA VARMA, of endless and unbounded fame, whose understanding was chastened with devotion, whose soul was virtuous—(the image of) *Kátyáyaní* was established and deposited in this cavern of the *Vindhya* mountains, with a hope that this act of virtue will remain as long as sun, earth, moon, and stars endure.

He consecrated to this goddess a beautiful village named *Dándí*, the wealth of which cannot be exhausted by short enjoyment, whose impurities mud and blemishes are washed away by the clear water of the *Mahánadí*, perfumed by the odoriferous breezes of a full blown-garden of *Priyanga* and *Bacula* trees—and shaded by a cold mountain intercepting the rays of the sun; to be enjoyed for the period of a *Kalpa* (432 million of years)."

The next inscription of the same class is marked No. 15 of Pl. XXXVI. From the curve on the impression-paper, I suppose it occupies the arch above the main door of the *haftkhaneh* or seven-chamber cavern.

The first two lines, KAMALÁKÁNTA protests can have no connection with the third, as the measure is totally different. They consist of four *charanas* in the स्रग्धरा, or *Sragdharà* metre; and four similar ones are required to complete the verse: whereas the lower or third line is in the *Sárdúla vikrírita* measure, the same employed in the large inscription and in the two marked 16 and 17 of this plate, which appear to occupy opposite sides of the door. In their contents also there is the same disconnection; the two first lines being the commencement of an eulogy on KRISHNA the son of ANANTA VARMA (?) while all the others advert to himself and his father SÁRDU'LA VARMA alone. The sense also is incomplete; nothing of the acts of these individuals being recorded. Probably the stones have been misplaced at a subsequent period: at any rate we have an addition to our information of SÁRDU'LA in the mention of the third in descent of his family. KRISHNA appears only to have been a general in the army of the existing monarch of the day, whom we may now venture confidently to assume, from the alphabetical conformity, to have been one of the Gupta dynasty.

No. 15, the two first lines may be thus transcribed and translated, the first word only being doubtful :—

ऋज्वीनां मौखरीणां कुलमतनुगुणालंचकारात्मजन्मा।
श्रीशार्दूलस्यवोभूज्जनहृदयहरोनन्तवर्मा सुपुत्रः॥
कृष्णस्याक्षयकीर्त्तेः प्रवरगिरिगुहासंश्रिता देवमाता।
पूर्णंलोकं यशस्यं रचितमिव मुदाचीकरत्कीर्त्तिमन्तम्॥ १॥

1. "Offspring alike of the amiable* MAUKHARI', the ornament of her race, and of SA'RDU'LA, the exceedingly virtuous, and beauteous captivator of the hearts of men, was a son named ANANTA VARMA.

2. In the great cave of the mountain of KRISHNA the unblemished in fame, the mother of the gods (*Devamátá*) having established her seat with great glory and renown caused to be created sufficient men."

The first and last words of the last line appear in the original to be पूर्णा and कान्तिमत्य : which will give a less plausible turn to the sentence.

The third line of inscription 15 is as follows : it has the initial mark usual in native writings :—

कालःशत्रु महीभुजां प्रणयिनां इच्छाफलं प.दपे
शत्रुकुलस्य नैकसमरव्यापार शौभावतः॥

substituting सैन्य army, for शत्रु (written षत्रु) enemy, the meaning will be : "Destroying angel (*Yama*) of the kings of the earth who are his enemies ; bestower of the fruit of desire on his friends ; lamp of the race of warriors, shining forth in the field of battle..... "

The sense here broken off, leads naturally into the next verses, Nos. 16 and 17, making the epithets apply to SA'RDU'LA :—

श्रीशार्दूल इतिप्रतिष्ठितयशाः सामन्तचूड़ामणिः
कान्ताचित्तहरः स्मरप्रतिसमः पाता बभूव क्षितेः॥
श्रीशार्दूलनृपः करोति विषमां यत्र स्वदृष्टिं रिपो
उत्पत्तान्तविलोडितोरु तरलस्यैश्वर्यस्याग्रधः॥
तत्पुत्रस्य पतत्यनन्त सुखदस्यानन्त वर्म्मश्रुतेः†
तत्राकर्णविकृष्टशार्ङ्गशरधिव्यस्तशरौघावहः॥

* This epithet is purposely given because the lady's name has a precisely opposite signification!

† The व of VARMA has been carelessly omitted in the lithograph by myself.

" Lo ! the illustrious Sa'rdu'la whose fame is of the highest rank, the crest-ornament of champions ;—the beloved of the fair sex,—resembling the god of love,—once possessed the earth (reigned).

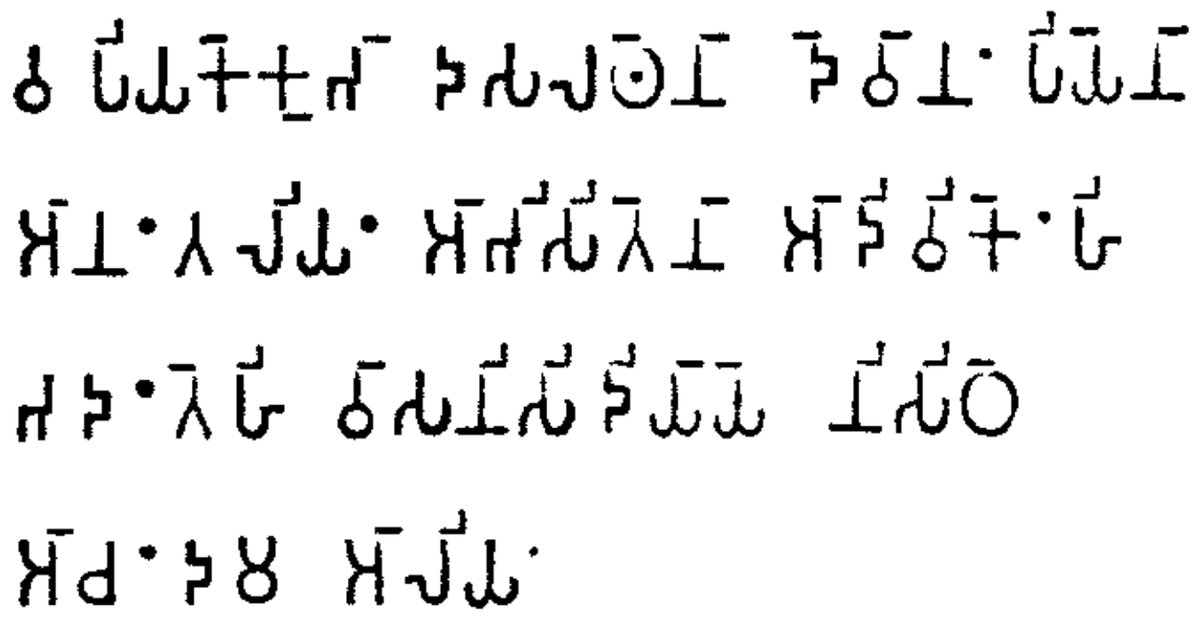
When this prince Sa'rdu'la casts a fear inspiring scowl on his enemies—then of his angry son Ananta Varma the giver of endless pleasure, whose great tremulous red eye manifestly annihilates the allies of his foes,—shower down upon them a cloud of arrows from this powerful bow of horn drawn up to his ear."

We now pass to two inscriptions of a totally different kind, lithographed carefully as No. 2 and No. 3 of Pl. XXXV.

They are situated, as far as I can make out from the Persian labels, in two different caves. They are rudely cut ; and from the appearance of the ink-impressions which are more blotched, than for distinctness sake I have represented in the lithograph, they must be much more worn with age than any of the other inscriptions, which seem still to retain much of their original sharpness of sculpture.

It was evident at first sight that these two inscriptions were in the lát character : further examination also taught me that with exception of the initial word, the two were identical letter for letter, though differently arranged in lines ! This was a most fortunate discovery, as the indistinctness of several letters in No. 2, could thus be remedied without hesitation from the text of No. 3.

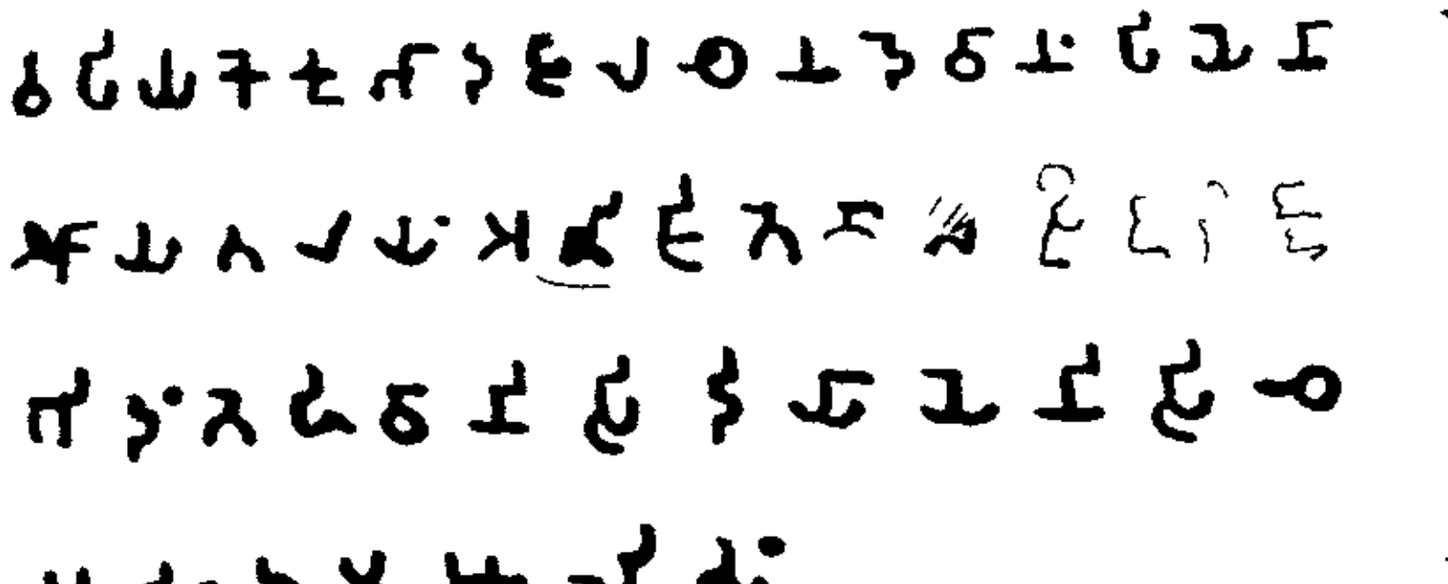
Taking it for granted that the language of such an inscription, from its situation in the very heart of *Magadha*, would prove to be the *Mágadhí*, I hastened with eager curiosity to write it out fair and to spell its contents ; which I think will be allowed to be of higher importance than any yet described, and most probably expressive of the first appropriation, if not formation of the *Gaya* caves. Taking the first of the two as a sample of both, I thus divide the words :—



Vapiyake kubhá Dasaiathéna devánanp·ge·a
ayaṃtaliyaṃ ábhisiténa ádivkeṇhi
bhadaṇtéhi rásanisidiyáyé nisithe
áchaṇḍama aliyaṃ.

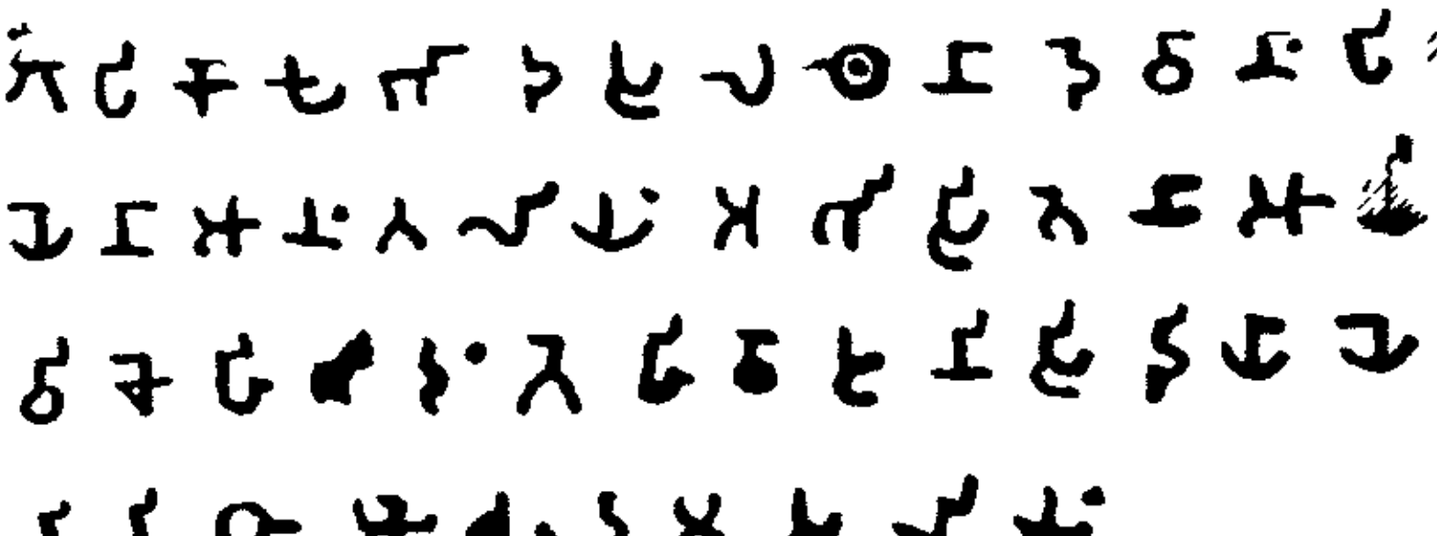
Facsimiles of Inscriptions from Nagárjuni rock, Gaya.

No 2



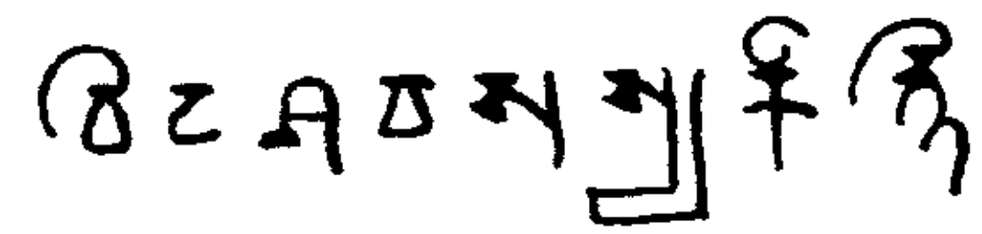
In a chamber of the Nagarjuni cave, upper part of north side west of the door.

No 3



without the entrance of the Nagarjuni cave.

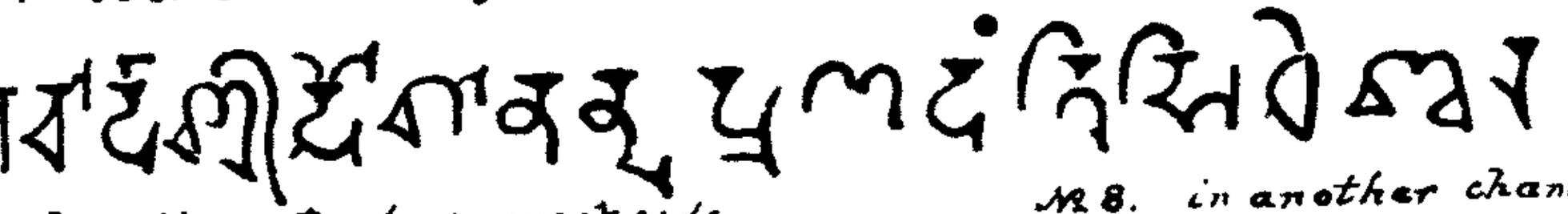
No 4. *in another chamber at Nagarjuni - North. (west of entrance)*



No 5. *in upper part of east corner of another chamber.*



No 6. *over the door of another chamber. east side.*



No 7. *above the outer door - west side*



No 8. *in another chamber*



No 9. *north door of Karn chaupar.*



No 10 - *not specified*



No 11. *west corner of north door ditto*



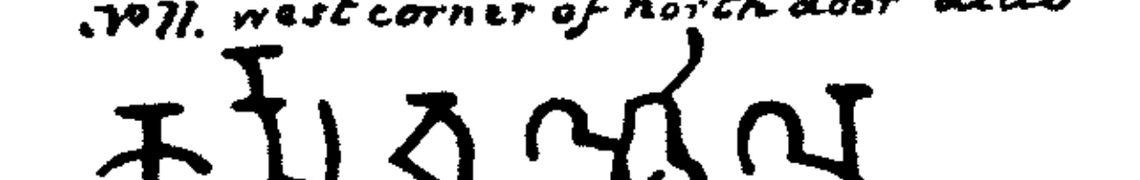
No 12 *west corner north door ditto, above.*



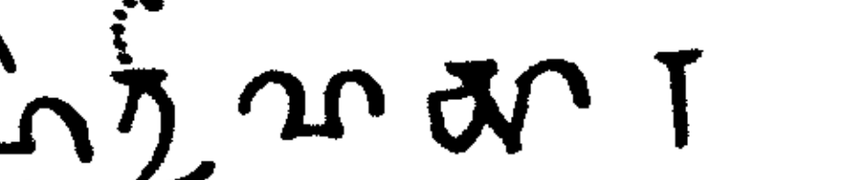
No 13. *from the same place*



No 14 *east corner of east door.*



No 15. *west corner of north door.*



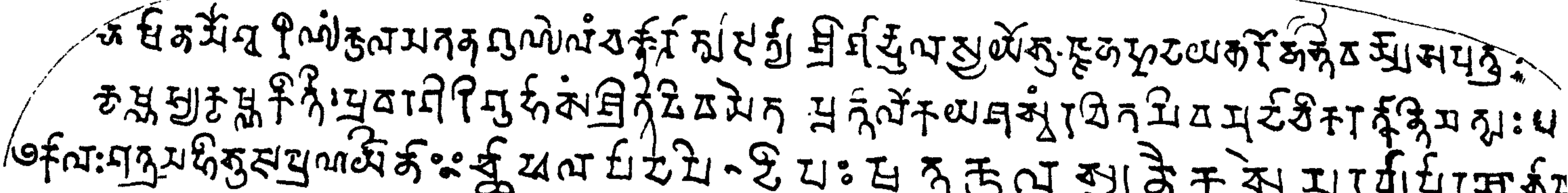
No 16 *east corner of the same door.*



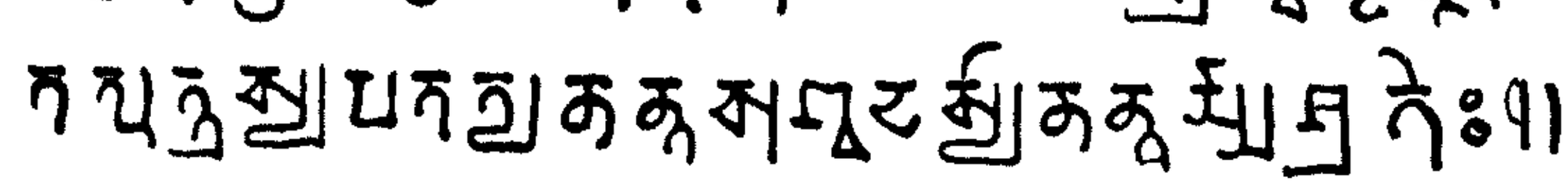
from ink impressions

Prinsep lith

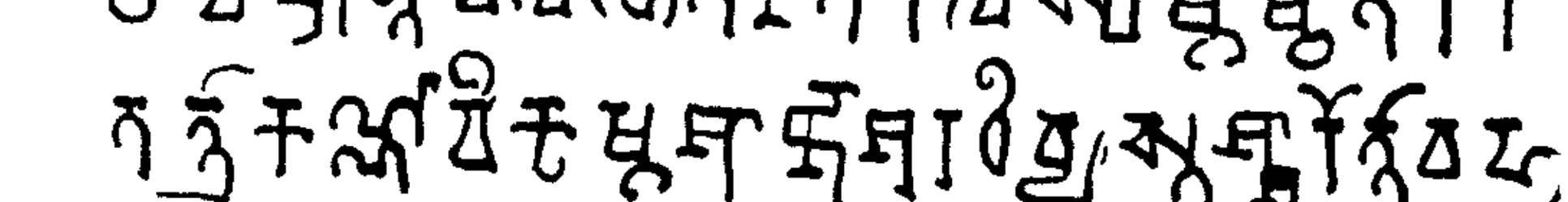
15. Inscription over the east door of the Haft-khaneh or Seven chambers.



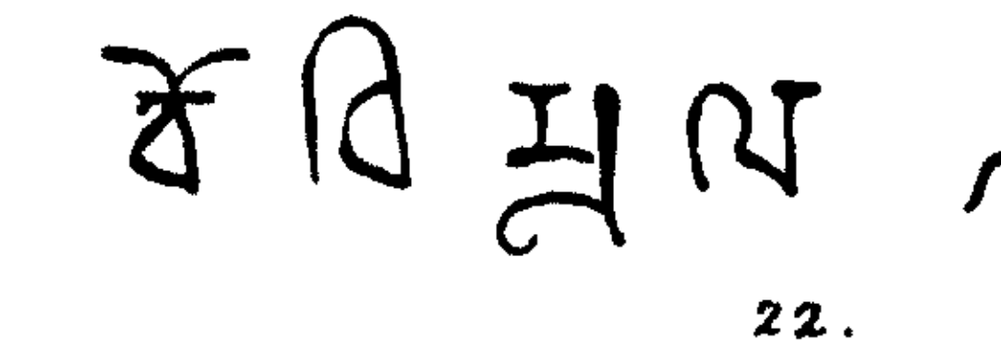
16. Inscription on the east side of the same



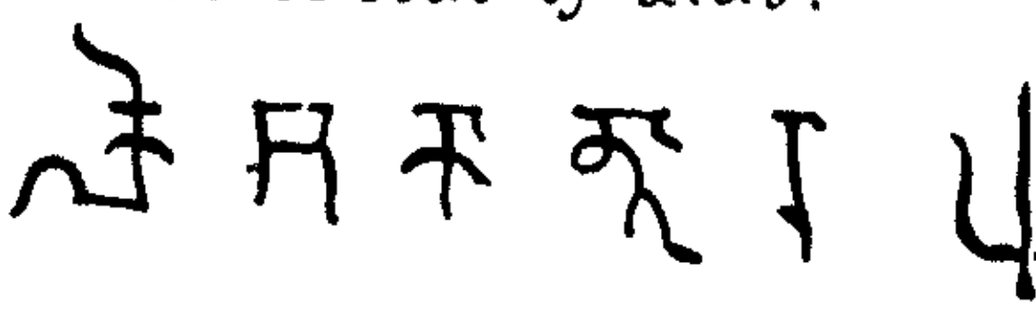
17. Inscription on the west side of the same.



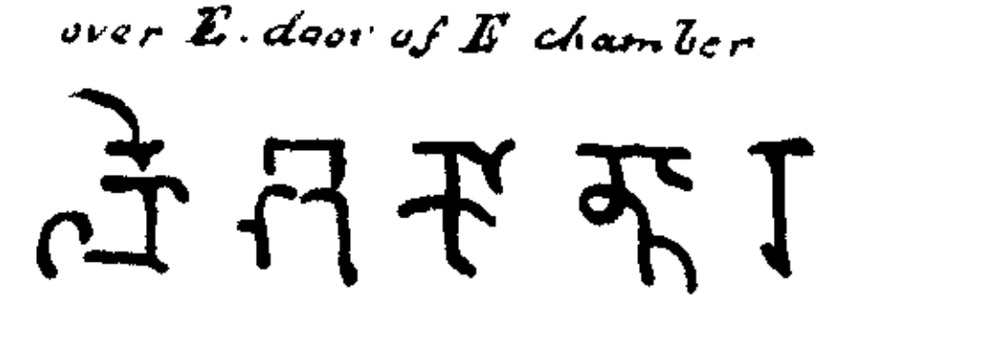
18
over door of west chamber.



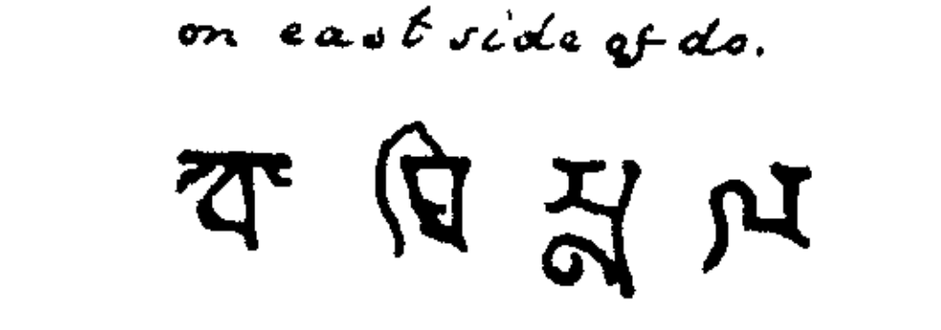
19
on east side of ditto.



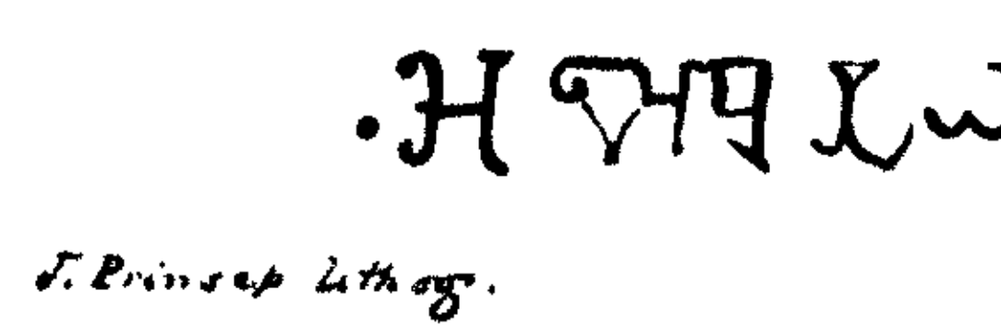
20
over E. door of E chamber



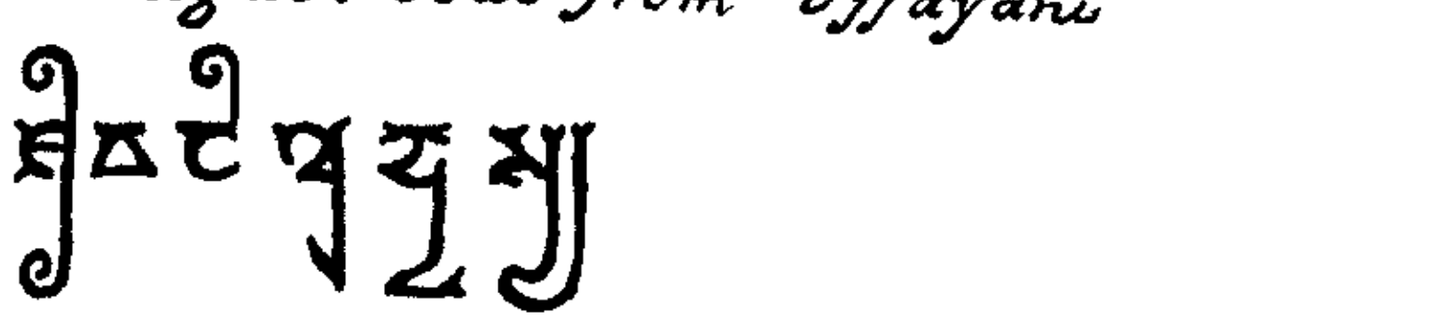
21
on east side of do.



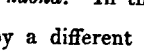
22.
On a Buddhist fragment in Cashmir 5 f. high.



23.
On an agate seal from Ujjayani



J. Prinsep Lithog.

The only variation in the second inscription, as I have said, is in the first word; which instead of  *Vapiyake kubha*, is here *Gopiká kubhá*. In these evidently the word *kubhá* is a noun accompanied by a different adjective in each case; and allowing it to be the vernacular rendering of the Sanskrit गुहा *guhá*, or गर्भः *garbhah*, a cave, for which we have every sanction in the *Delhi* inscription, we may understand the two terms as विप्रिका गर्भः *vipriká garbha*, the 'brahmani maiden's cave,' and गोपिका गर्भः *gopiká garbha*, the 'milk-maid's cave.' Even should the transition from *g* to *k* be objected to, the same meaning may be elicited by rendering *kubha* as कुम्भ *kumbha*, a hollow sounding vessel of pottery, which the cave in some measure resembles.

Dasalathená devánampiyená, दशरथेन देवानां प्रियेण, 'by DASARATHA the beloved of the gods,'—

Anantaliyam abhisitená, अनन्तर्यं अभिषिक्तेन, 'immediately upon his receiving regal anointment.' These words are so regularly formed that there can be no hesitation in understanding them to refer to the act of a prince of the name of DASARATHA, in the beginning of his reign; but it will be remarked with surprize that the title of rája is omitted, and the epithet 'beloved of the gods' already familiar to us, stands alone; as is also frequently the case on the pillar monuments.

The name of DASARATHA is well known to the reader of Indian legends as a celebrated king of *Ayodhya*, the father of the great RA'MA; but this person belongs rather to the mythological period than to the limits of sober history; and further, the conspicuous position he occupies in a tale of brahmanical orthodoxy would at once exclude him from any possible connection with our *Gaya* monument. Looking, however, into the *Magadha* catalogue we find a rája also named DASARATHA next but one below DHARMA ASOKA, the great champion of the Buddhist faith; he is not mentioned in WILFORD's list, nor in that given by TOD, but the authorities consulted by both HAMILTON and WILSON (the *Bhágavat Purána ?*) include his name.

I have purposely referred to the passage in the *Bhágavat Purána*, which I here extract, because it now becomes an interesting point to explain the cause of the discrepancy.

सर्व चन्द्रगुप्तं वैदिजो राज्येभिषेक्ष्यति तत्सुतो वारिसारस्तु ततश्चाशोक वर्द्धनः।
सुयशाभविता तत्सुतः सुयशः सुतः आखिशूक खतखस्य सोमशर्मा भविष्यति॥

"Thus then the brahmin will anoint CHANDRAGUPTA to the kingdom:—his son VA'RISA'RA also; then ASOKA VERDDHANEH; then will be SUYASA': of

whom SANGATA, (will be) the famous son ; then from him will be born SALISUKA, and his son will be SOMA SERMA, &c."

On this passage the commentator, SRI' DHARA GOSHWÁMI' remarks :

तेषां पंचमो दशरथः पराशरादिभिरुक्तोऽत्रापनुसन्धेयः तेन सह मौर्य्यादश सप्तत्रिंश दुत्तरं शतं समाः । १ ।

"Of these the fifth was DASARATHA according to PARA'SARA and others, who ought to be here introduced (before SANGATA) : with him there are 10 princes of the *Maurya* line, and they reigned 137 years." (By a mistake in the printed copy the numbers are made 17 and 130.)

PARÁSARA'S catalogue (which I have not been able to consult) is doubtless the most correct of the two : and the fifth name is justly inserted for this most fortunate discovery of a recorded gift by him to Buddhist ascetics, in the very vicinity of the capital of the *Magadha* kingdom,—in the very character and language lately proved to have been used by ASOKA'S contemporary in *Ceylon*—and by AGATHOCLES in *Bactria* at the same epoch—leaves no doubt of the existence and identity of our DASARATHA. We must consequently hail his restoration as another important point fixed in the obscure history of that interesting period—another proof of the great utility of studying these indelible and undeniable records of antiquity. We have already gained several links of the *Magadha* dynasty of the *Maurya* line :—through the coins of this Pálí type we have VIPRA DEVA, three of the MITRAS (which we may conjecturally place among the *Ashtimitra* (or eight Mitras) of TOD'S catalogue—) and BHAGAVATA. To these we now add from the cave inscription DASARATHA, while from the concurrent testimony of Brahmans, and Buddhists, and Greeks, we have CHANDRAGUPTA, ASOKA, &c. established beyond dispute. I have little doubt that the sketch will soon be filled up, and that the historical prophecies of the Puránas will still be found to contain some trust-worthy information.

The next three words I would read *ádivikemhi* (for *ádivikamehi*) *bhadaṇtehi vásanisidyáye*—in Sanskrit आदि विकमैः भदन्तैः वासन सिध्यै, 'for the preparation of a hermitage by the most devoted Buddhist ascetics' *(Bhadantas)*. The remainder *nisiṭha áchandama áliyam* is rather more removed from the Sanskrit idiom, but there can be little doubt that it represents निष्ठापितः आचन्द्रमा आलयः (made neuter as आलयं in Pálí), 'was caused to be established as long as the moon (shall endure) a house.' Or, putting the whole together :—

"The brahman-girl's cave (and the 'milkmaid's cave' respectively), excavated by the hands of the most devoted sect of Bauddha ascetics, for the purpose of a secluded residence, was appointed their habitation in perpetuity, by DASARATHA, the beloved of the gods, immediately on his ascending the throne."

To comment further on this highly curious announcement will be premature until we have benefited by the examinations now in progress on the west of India, of the inscriptions in similar characters on the caves of *Carli, Keneri, Adjanta,* &c. It will probably be found that most of them belong to the same period, and some may yet furnish a clue to their actual date, which is still a matter of obscurity.

The insulated fragments in plates XXXV.-VI. will not detain us long. None of them are in the most ancient character, or we might have looked for the usual donations!—On the contrary they seem to designate the names of places of attention, the Buddhist sacred tree, or of Hindu images subsequently introduced. They are in every gradation of alphabet from No. 2 of *Allahabad* to the modern Devanágarí. It will be best to take them according to their numbers.

Short Inscriptions from the Nágárjuní cave.

No. 4, (the second alphabet.) विटशवसशकोर्त्ति, 'the renown of VITASAVASAH'—probably the name of some rich contributor.

No. 5, is illegible, except the last two letters, वादे.

No. 6, in a modern character, say of the sixth century: the same as was found on one of the *Manikyala* coins of *Srí Yag...*

आचार्य श्रीयोगानन्द प्रणयति सिद्धेश्वर. 'The irresistible and auspicious YOGANANDA reverently salutes SIDDHESWARA.' The want of the *anuswara* or sign of the accusative case to *Ananda* or *Siddheswara* leave it ambiguous which is the saluting and which the saluted party!

No. 7. श्रीकर्म मार्गयोगी.. *Srí Karmamárga Yogí..* a name, but incorrectly written *(Jogi)*, and in quite a modern type.

No. 8. The same remarks apply to this which reads शयंकरनाथ.

Nos. 9, 10. Illegible and in a rude style of writing which I have only met with on one other monument, the trident of *Barahát*,—see plate IX. of vol. V.

No. 11. कर्मचण्डाल? *Karmachandúla,* in very large and plain characters, probably a name.

No. 12. महात्रिणसार, *Mahátriṇasára,* the great plantain, or *sár* tree.

No. 13. श्रीरणसिं (ह) 'The illustrious tiger of battle,' a name.

No. 14. विकटतुंमशिव 'Oh! formidable, dread, Siva.'

No. 15. दरिद्रकान्दार 'The beggars' cavern, or difficult road:'—probably the name of one of the caves.

No. 16. बोधिमूल 'The root of the fig-tree (or of knowledge)'? This formula is repeated several times in other places as in Nos. 18 and 21 of the *haftkhaneh* series (plate XXXVI.) as though the root of the sacred tree had penetrated in various places into the caves below.

Nos. 19 and 20. क्लेशकान्तार *klesha kántára*, a title of similar purport to *daridra kántára*, 'the cave of affliction.'

Fragments of Inscription from Cashmir.

No. 22, is a fragment of the only inscription Mr. G. T. Vigne was able to meet with in his recent tour to *Cashmir*. It is quite illegible, though perhaps it may be asserted to be Sanskrit. It is hardly worth recording what the pandits of the valley pretended to make of it, (*mipadu dabha* 24,) as they were certainly wrong in every letter! It was found on a small *Buddha* stone, five feet high; and is therefore most probably a portion of the usual sentence on such objects.

No. 23, is copied from the impression of a fine *sulimáni* or calcedonic agate seal, discovered in the vicinity of *Ujain* and presented to me by Lieutenant E. Conolly 6th Cav. I have inserted it here on account of the close resemblance of its character to that of No. 4, (plate XXXV.) It is also very like the elongated style of the Saurashtra coin legends lately deciphered. The reading is श्रीवटिखुद्दस्य '(the seal) of Srí Vati Khudda'—a name unknown in Hindu nomenclature. It is rather uncertain whether the second letter be not open at bottom, in which case it will read *Bhati*.

Inscription on the Jetty at Singapur, Pl. XXXVII.

Numerous have been the inquiries about this inscription—numerous have been the attempts to procure a copy of it, from some of the constant visitors to the Straits for amusement or the benefit of their health. By some I was assured that the letters were evidently European and the inscription merely a Dutch record. Others insisted that the character was precisely that of the *Delhi* pillar, or that of *Tibet*. While the last friend, Lieutenant C. Mackenzie, who kindly undertook the commission, gave it up in despair at its very decayed state which seemed utterly beyond the power of the antiquarian; and in this he was quite right. Nevertheless a few letters still remain, enough to aid in determining at least the type and the language, and therefore the learned will be glad to learn that Dr. William Bland, of H. M. S. Wolf, has at length conquered all the discouraging difficulties of the task, and has enabled me now to present a very accurate facsimile of all that remains any way perceptible on the surface of the rocky fragment at *Singapur*.

The following note from himself fully explains the care and the method adopted for taking off the letters, and I have nothing to add to it but my concurrence in his opinion that the character is the *Páli*, and that the purport therefore is most probably to record the exten-

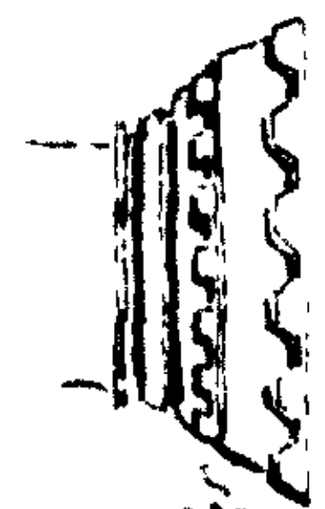


Fig. 1.

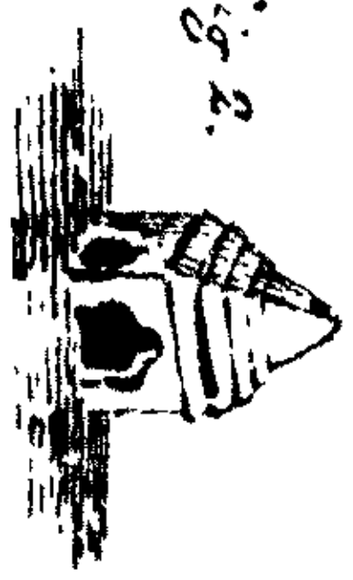


Fig. 2.

REMAINS OF AN INSCRIPTION ON A ROCK AT SINGAPORE.

taken with great care by Dr W. Bland, H.M.S. Wolf

Scale, one twelfth of the original

sion of the Buddhist faith to that remarkable point of the ***Malay Peninsula***. I cannot venture to put together any connected sentences or even words, but some of the letters, the *g*, *l*, *h*, *p*, *s*, *y*, &c. can be readily recognized; as well as many of the vowel marks.

"On a tongue of land forming the termination of the right bank of the river at *Singapore*, now called Artillery Point, stands a stone or rock of coarse red sandstone, about ten feet high, from two to five feet thick, and about nine or ten feet in length, somewhat wedge-shaped with weather-worn cells. The face sloping to the south-east at an angle of 76° has been smoothed down in the form of an irregular square, presenting a space of about thirty-two square feet, having a raised edge all around.

On this surface an inscription has originally been cut of about fifty lines, but the characters are so obliterated by the weather, that the greater part of them are illegible. Still there are many left which are plain enough, more particularly those at the lower right hand corner, where the raised edge of the stone has in some measure protected them.

Having frequently made pilgrimages to this rock, and as often regretted that its present weather-worn condition hid from us a tale, of "the days of other years," I determined if it were possible, to save a few letters, could they be satisfactorily made out, to tell us something however small, of the language or the people who inscribed it, and hence eke out our limited and obscure knowledge of the Malayan peninsula.

These considerations however strong, were very apt to give way, when it was almost universally known, that many had attempted to decipher the writing in question, and had failed to make any thing of it, among whom was, one of great eminence and perseverance, the late Sir S. Raffles. Courage was nevertheless taken, and with the assistance of a clever native writer, to work we went, and the following method was adopted to insure correctness.

A learned friend of mine suggested, that well made and soft dough, ought to be tried, for even school-boys used it for taking impressions from seals: it was tried accordingly and found to answer well, and when the impression of one character was taken and copied, the letter itself in the stone was painted exactly over with white lead, as far as the eye could make it out, when the character was copied a second time, and if the two agreed, it was considered as nearly correct as possible, and although this was done to all the characters, it was more particularly attended to in the more obscure ones, for the letters

marked in the facsimile with more strength, could readily be copied by the eye.

There is another thing worthy of being noticed, which is, that after a few days' work, we discovered that when the sun was descending in the west, a palpable shadow was thrown into the letter, from which great assistance was derived, no doubtful letter has been admitted in the facsimile sent for your supervision, and it may be fairly doubted whether you will ever get a better or more honest copy.

As to the character in which the inscription is written, speaking from a very limited knowledge of the subject, my opinion the very first day, was, that it is in the ancient Ceylonese, or Pálí; but as you have lately, with great perseverance and deserved success, made plain inscriptions hitherto perfectly a dead letter, I have great hopes you will be able to make something out of this celebrated stone of *Singapore*.

I may as well mention that tradition among the *Malays*, point to *Telinga* and *Ceylon* as its origin, which may be seen more at length in Leyden's Malayan Annals.

W. Bland."

V.—*Note on the Primary language of the Buddhist writings.* By B. H. Hodgson, *Esq. Resident in Nipal.*

To the Editor, Journal As. Soc.

I have read article II. of the 66th No. of your Journal with great interest. With regard to the language in which the religion of Sa'kya, 'was preached and spread among the people,' I perceive nothing opposed to my own opinions in the fact that that language was the vernacular.

There is merely in your case, as priorly in that of Mr. Turnour, some misapprehension of the sense in which I spoke to that point.

The preaching and spreading of the religion is a very different thing from the elaboration of those speculative principles from which the religion was deduced. In the one case, the appeal would be to the many; in the other, to the few. And whilst I am satisfied that the Buddhists as practical reformers addressed themselves to the people, and as propagandists used the vulgar tongue, I think that those philosophical dogmata which formed the basis of the popular creed, were enounced, defended and systematised in Sanskrit. I never alleged that the Buddhists had eschewed the Prákrits: I only denied the allegation that they had eschewed the Sanskrit; and I endeavoured, at the same time, to reconcile their use of *both*, by drawing a

distinction between the means employed by their philosophers to establish the principles of this religion, and the means employed by their missionaries to propagate the religion itself.

JOINVILLE had argued that Buddhism was an original creed, older than Brahmanism, because of the grossness of its leading tenets which savour so much of 'flat atheism.'

I answered that Buddhism was an innovation on the existing creed, and that all the peculiarities of the religion of SA'KYA could be best and only explained by advertence to shameful *prior abuse* of the *religious sanction*, whence arose the characteristic *Bauddha* aversion to gods and priests, and that enthusiastic self-reliance taught by Buddhism in express opposition to the servile extant reference of all things to heavenly and earthly mediation. JONES, again, had argued that the Buddhists used only the Prákrit because the books of *Ceylon* and *Ava*, (the only ones then forthcoming*,) were solely in that language or dialect. I answered by producing a whole library of Sanskrit works in which the principles of Buddhism are more fully expounded than in all the legendary tomes of *Ceylon* and *Ava*; I answered, further, by pointing to the abstruse philosophy of Buddhism, to the admitted pre-eminence, as *scholars*, of its expounders; and to their location in the most central and literary part of India (*Behar* and *Oude*). With the Sanskrit at command; I asked and ask again, *why* men so placed and gifted, and having to defend their principles in the schools against ripe *scholars* from all parts of India (for those were days of high debate and of perpetual formal disputation in palaces and in cloisters) should be supposed to have resorted to a limited and feebler organ when they had the universal and more powerful one equally available? The presumption that they did *not* thus postpone Sanskrit to Prákrit is, in my judgment, worth a score of any inferences deduceable from monumental slabs, backed as this presumption is by the Sanskrit records of Buddhism discovered here. Those records came direct from the proximate head-quarters of Buddhism. And, if the principles of this creed were not expounded and systematised in the schools of India in Sanskrit, what are we to make of the Nepálese originals and of the avowed Tibetan translations? In my judgment the *extent* and *character* of these works settle the question that the philosophic founders of Buddhism used Sanskrit and Sanskrit only, to expound, defend and record the speculative principles of their system,

* Sir W. JONES had, however, in his possession a Sanskrit copy of the *Lalita Vistara*, and had noticed the personification of Diva Natura under the style of Arya Tara.

principles without which the vulgar creed would be (for us), mere leather and prunella! Nor is this opinion in the least opposed to your notion (mine too) that the *practical system* of *belief*, deduced from those principles, was spread among the people of the spot as well as propagated to remoter spots by means of the vernacular.

It is admitted that Buddhism was long taught in *Ceylon* without the aid of books: and that the first book reached that island nearly 300 years after the introduction of the creed.

Here is a distinct admission of what I long since inferred from the general character of the religion of Sa'kya in that island, viz. the protracted total want, and ultimate imperfect supply, of those standard written authorities of the sect which regulated belief and practice in *Magadha*, *Kosala* and *Rájagriha*,—in a word, in the *Metropolis* of Buddhism. From this metropolis the authorities in question were transferred directly and *immediately* to the *proximate hills* of *Nepál*, where and where only, I believe, they are now to be found. If not translations, the books of *Ceylon* have all the appearance of being ritual collectanea, legendary hearsays, and loose comments on received texts—all which would naturally be written in the vulgar tongue*. To these, however, we must add some very important historical annals, detailing the spread and diffusion of Buddhism. Similar annals are yet found in Tibet, but, as far as I know not in *Nepál*, for what reason it is difficult to divine.

But these annals, however valuable to us, for historical uses, are not the original written standard of faith; and until I see the *Prajná Páramita* and the nine *Dharmas*† produced from *Ceylon*, I must continue of the opinion that the Buddhists of that island drew their faith from secondary, not primary sources; and that whilst the former were in *Ceylon* as elsewhere, vernacular; the latter were in *Magadha* and *Kosala*, as they are still in *Nepál*, classical or Sanskrit!

Certainly Buddhism, considered in the practical view of a religious system, always appealed to the common sense and interest of the many, inscribing its most sacred texts (Sanskrit and Prákrit) on temple walls and on pillars, placed in market, high-road and cross-road.

* *Such* works written in the vulgar tongue are common in *Nepál* and frequently we have a Sanskrit text with a vernacular running commentary.

† They *have* one of the 9, viz., the *Lalita Vistara*; but M. Burnouf assures me, in a miserably corrupted state. Now, as this work is forthcoming in a faultless state in Sanskrit, I say the Páli version *must* be a translation. (Await Mr. Turnour's extracts and translations before pronouncing judgment.—Ed.)

This material fact (so opposite to the genius of Brahmanism), I long since called attention to; and thence argued that the inscriptions on the láts would be probably found to be scriptural texts!

The tendency of your researches to prove that the elaborate forms of the Deva Nágarí were constructed from simpler elements, more or less appropriated to the popular Bháshás, is very curious; and seems to strengthen the opinion of those who hold Hindí to be indigenous, older than Sanskrit in India, and not (as COLEBROOKE supposed) deduced from Sanskrit. If Buddhism used these primitive letters before the Deva Nágarí existed, the date of this creed would seem to be thrown back to a remote æra, or, the Sanskrit letters and language must be comparatively recent.

I can trace something *very like* Buddhism into far ages and realms: but I am sure that that Buddhism which has come down to us in the Sanskrit, Pálí and Tibetan books of the sect, and which only therefore we do or can *know*, is neither old nor exotic. *That* Buddhism (the doctrines of the so called *seventh* Buddha) arose in the middle of India in comparatively recent times, and expressly out of those prior abominations which had long held the people of India in cruel vassalage to a bloated priesthood.

The race of *Sáka*, or progenitors of *Sákya Sinha* (by the way, the *Sinha* proves that the princely style was given to him until he assumed the ascetic habit) may have been Scythians or Northmen, in one sense; and so probably were the Brahmans in that same sense, viz. with reference to their original seat. (Brachmanes nomen gentis diffusissimæ, cujus maxima pars in montibus degit; reliqui circa Gangem.)

If one's purpose and object were to search backwards to the original hive of nations, one might, as in consistency one should, draw Brahmanism and Buddhism, VYA'SA and SA'KYA, from Tartary. All I say is, that quoad the known and recorded man and thing—SA'KYA SINHA and his tenets—they are indisputably Indian and recent*.

I incline to the opinion that Hindí may be older in India than Sanskrit, and independent, originally, of Sanskrit. But were this so, and were it also true that the Buddhists used the best dialect of Hindí (*that* however is saturated with Sanskrit, whatever its primal independence) such admissions would rather strengthen than weaken the argument from language against the exotic origin of Buddhism†.

* According to all Bauddha authorities the lineage of the whole seven mortal Buddhas is expressly stated to be Brahmanical or Kshetriya! What is the answer to this?

† Our own distinguished WILSON has too easily followed the continental Eu-

According to this hypothesis, Hindí is not less, but more, Indian than Sanskrit: and, á fortiori, so is the religion assumed to have committed its records to Hindí.

But, in very truth, the extant records of Buddhism, whether Sanskrit or Prákrit, exhibit both languages in a high state of refinement; and though one or both tongues came originally from Tartary, they received that refinement in India, where, certainly, what *we know* as Buddhism, (by means of these records) had its origin, long after Brahmanism had flourished there in all its mischievous might.

P. S. You will, I hope, excuse my having adverted to some other controverted topics besides that which your paper immediately suggested. These questions are, a good deal, linked together: for instance, if Buddhism furnishes *internal* evidence throughout its most authentic records that it is the express antithesis of Brahmanism, its posteriority of date to the latter is decided, *as well as* its *jealousy* of *priestly pretensions*. Nec clericis infinita aut libera potestas, is a deduction which only very precise and weighty evidence will suffice to set aside: I have seen none such yet from *Ceylon* or from *Ava*. And be it observed I here advert to authentic scriptural tenets, and not to popular corruptions resulting from the facile confusion of the ascetic with the clerical profession.

Note. We are by no means prepared to enter into a controversy on a subject on which we profess but a slight and accidental acquaintance: nor will we arrogate to ourselves the distinction of having entered the lists already occupied by such champions as Mr. Hodgson and Mr. Turnour, who have both very strong arguments to bring forward, in support of their opposite views. As far as the *Dharmalipi* could be taken as evidence the vernacularists had the right to it; but on the other hand there can be no doubt, as Mr. Hodgson says, that all scholastic disputation with the existing Brahmanical schools which Sa'kya personally visited and overcame, must have been conducted in the classical language. The only question is, whether any of these early disquisitions have been preserved, and whether, for example, the Life of Sa'kya, called the *Lalita Vistára*, found by Professor Wilson to agree verbatim with the Tibetan translate examined simultaneously by Mr. Csoma, has a greater antiquity than the *Pitakattayan* of *Ceylon*? We happen fortuitously to have received at this moment two letters bearing upon the point in dispute from which we

ropean writers in identifying the *Sáka vansa* with the classical Sacæ or Scythians, and Buddhism with Samanism. The Tartars of our day avow that they got all their knowledge from India: teste *Kahgyur* et *Stangyur*.

gladly avail ourselves of an extract or two :—Mr. TURNOUR, alluding to the notice of the life of SA'KYA from the Tibetan authorities by Mr. CSOMA in the As. Res. Vol. XX. writes—"The Tibetan life is apparently a very meagre performance, containing scarcely any thing valuable in the department of history; whereas had the materials whence it was taken been genuine, the translator would have been able to bring forward and illustrate much valuable information on the pilgrimages and the acts of SA'KYA in various parts of India during the 45 years he was *Buddha*. Even the superstitious facts recorded are much more absurd than they are represented in the *Pitakattayan*. Thus the *dream* of MÁYÁ DEVÍ of having been rubbed by a *Chhadanta* elephant, during her pregnancy,—is converted into a matter of fact, of SÁKYA, 'in the form of an elephant having entered by the right side into the womb or cavity of the body of MÁYÁ DEVÍ!' '*Chhadanta*' is taken literally as a *six-tusked* elephant, whereas by our books *Chhadanta* is the name of a lake beyond the *Himálaya* mountains where the elephants are of a superior breed. It is mentioned twice in the Maháwanso (Chaps. 5 and 22)."

If the rationality of a story be a fair test of its genuineness, which few will deny, the *Páli* record will here bear away the palm :—but it is much to be regretted that we have not a complete translation of the Sanskrit and of the Ceylonese "life" to place side by side. It is impossible that instruction should not be gained by such an impartial examination*. But to return to the subject under discussion; my friend Mr. CSOMA writes from *Titalya* in the *Purniya* district :—

* As an example of the information already obtained from Mr. Csoma's translated sketch, we may adduce the origin of the custom seemingly so universal among the Buddhists of preserving pictorial or sculptured representations of the facts of his life.—After his death the priests and minister at *Rájagriha* are afraid of telling the king AJATA SATRU thereof lest he should faint from the shock, and it is suggested by MAHA'KASHYAPA by way of breaking the intelligence to him, that the *Mahámantra* or chief priest should "go speedily into the king's garden, and cause to be represented in painting, how CHOMDANDAS *(Bhagaván)* was in *Tushitá*: how in the shape of an elephant he entered his mother's womb: how at the foot of the holy fig-tree he attained supreme perfection: how at *Varánasí* he turned the wheel of the law of twelve kinds, (taught his doctrines:)—how he at *Sravastí* displayed great miracles;—how at the city of *Ghachen* he descended from the *Traya Strinsha* heaven, whither he had gone to instruct his mother:—and lastly how having accomplished his acts in civilizing and instructing men in his doctrine at several places, he went to his last repose in the city of *Kusha* in *Assam*." Now whether the book in question was written sooner or later, it explains the practice equally and teaches us how we may successfully analyze the events depicted in the drawings of *Adjanta*, perchance, or the sculp-

"In reference to your and Mr. Turnour's opinion that the original records of the Buddhists in ancient India, were written in the *Mágadhí* dialect, I beg leave to add in support of it, that in the index or register (དཀར་ཆག *dkar-chhag*) of the *Kahgyur*, it is stated that the *Sútras* in general—*i. e.* all the works in the *Kahgyur* except the 21 volumes of the *Sher-chhin* and the 22 volumes of the r*Gyud* རྒྱུད class, after the death of Shákya, were first written in the *Sindhu* language and the *Sher-chhin* and r*Gyud* in the Sanskrit: but part of the r*Gyud* also in several other corrupt dialects. It is probable that in the seventh century and afterwards, the ancient Buddhistic religion was remodelled and generally written in Sanskrit, before the Tibetans commenced its introduction by translation into their own country."

This explanation, so simple and so authentic, ought to set the matter at rest, and that in the manner that the advocates of either view should most desire, for it shews that both are right!—It is generally allowed that the *Páli* and the *Zend* are derivatives of nearly the same grade from the Sanskrit stock; and the modern dialect of Sinde as well as the *Bhásha* of upper and western India present more striking analogies to the *Páli*, in the removal particularly of the *r*, and the modification of the auxiliary verbs, than any of the dialects of *Bengal, Behar*, or *Ceylon**. Plausible grounds for the existence of this western dialect in the heart of *Magadha*, and the preference given it in writings of the period, may be found in the origin of the ruling dynasty of that province, which had confessedly proceeded from the north-west. At any rate those of the *Sákya* race, which had emigrated from *Sinde* to *Kapila vastu* (somewhere in the *Gangetic* valley) may have preserved the idiom of this native province and have caused it to prevail along with the religion which was promulgated through its means.

We are by no means of opinion that the *Hindí*, *Sindhí*, or *Pálí* had an independent origin prior to the *Sanskrit*. The more the first of these, which is the most modern form and the farthest removed from the classical language, is examined and analyzed, the more evidently is its modification and corruption from the ancient stock found to follow systematic rules, and to evince rather provincial dialectism (if I may use the word) than the mere engraftment of foreign words upon a pre-existent and written language. The aboriginal terms of

tures of *Bhilsa*, with a full volume of the life of Sha'kya in our hand. Similar paintings are common in *Ava*, and an amusing, but rather apocryphal, series may be seen in Upham's folio history of Buddhism.

* See the Rev. Dr. Mill's note on this subject in the J. A. S. Vol. V. p. 30; also Professor Wilson's remarks, Vol. I. page 8.

Indian speech must be rather sought in the hills and in the peninsula; in the plains and populous districts of the north the evidences of their existence are necessarily smothered by the predominance of the refined and durable languages of the court, of religion, and of the educated classes. A writer in the Foreign Quarterly has lately been bold enough to revive the theory of Sanskrit being merely a derivative from the Greek through the intervention of the Zend, and subsequent to the Macedonian invasion! The Agathocles' coin ought to answer all such speculations. The *Páli* of that day along with its appropriate symbols is proved to have held the same precise derivative relation to the Sanskrit as it does now—for the records on which we argue are not modern, but of that very period. All we still want is to find some graven Brahmanical record of the same period to shew the character then in use for writing Sanskrit; and to add ocular demonstration to the proofs afforded by the profound researches of philologists as to the genuine antiquity of the venerable depository of the Vedas.—Ed.

VI.—*Geometric Tortoises, "Testudo Geometrica." By Lieut.* T. Hutton, *37th Native Infantry.*

Africa being as yet the only recorded habitat of the Geometric Tortoise, I have thought it advisable to make known the existence of these animals in the hilly tracts of *Meywar*, and the adjoining districts, where they are found in the high grassy janglas, skirting the base of the hills, and are by no means of rare occurrence.

I usually employed a few Bheels to seek for them, who thought themselves well paid with a pint of brandy for a pair of Tortoises. Although not uncommon, they are nevertheless not easily procured, owing to their color and appearance being so blended with the rocky nature of the ground, as to render it difficult to distinguish them from surrounding objects; added to which, they remain in concealment, beneath shrubs or tufts of grass during the heat of the day.

The Bheels, however, are expert in tracking them through loose soils, and having discovered a foot print in the sand of a nullah, or the dust of the grass plains, they generally succeed in capturing the animal, by patiently following the traces it has left.

It is during the rainy season that they are in the greatest activity and wander about all day, feeding and coupling. At the approach of the cold weather they select a sheltered spot and conceal themselves by thrusting their shell into some thick tuft of grass and bushes, the better to protect them from the cold, remaining thus in a sort of

lethargic inactivity (for they are not torpid), until the hot season, at whichtime they only remain concealed during the heat of the day, coming out about sunset to feed.

As I have several of these animals alive, I shall give an outline of their general habits in a state of confinement. I have at different times procured seven of these creatures, three of which are females, and are easily distinguished by their larger size. They were all turned loose into a large enclosure, and well supplied with water, and grass, both dried and green, and a heap of bushes and grass to hide themselves in.

Throughout the hot season, they remained all day in concealment, coming out a little before sunset, to feed on the grass, lucern, or cabbage leaves, which were thrown to them. As night approached they did not again retire, but, as if enjoying the coolness of the air, remained stationary until morning, when they withdrew to their retreats before the sun rose. They did not wander about during the night, but remained as if asleep.

At this season they were fond of plunging into water where they would often remain for half an hour at a time: this, too, generally had the effect of making them void their excrement, which appeared to be hard oblong masses of ill digested vegetable fibres, and along with it a small quantity of a white chalky substance.

They drank a great quantity of water, which they took by thrusting in the head and swallowing it by draughts. As the rainy season set in, they became more lively and were to be seen throughout the day wandering about in the rain, feeding freely and resting at intervals, and frequently performing the rites of love. Often indeed two or three males succeeded each other with little intermission, without appearing to inconvenience the female who lay quite still cropping the grass within her reach. The male mounts on the back of the female like other quadrupeds, placing his fore legs on the top of the carapace while his hind legs rest on the ground. They remain engaged from ten minutes to a quarter of an hour, the male uttering, at intervals a groaning sound. They are not however, attached after the operation, as is said to be the case, but the desire of the male being appeased, he retires to rest and feed. During the whole period of the rains the females continued to admit the males freely, *i. e.* from the latter end of June until the middle of October, being nearly four months, when they became less familiar and drew off from each other.

On the 11th November 1835, one of the females commenced sinking a pit to receive her eggs, which she performed in the following manner. Having selected a retired spot at the root of a tuft of

coarse tall grass, she began to moisten the earth with water which she produced from the anus, and then with the strong horny toes of her hind feet, proceeded to scrape away the mud she had made. She used her hind feet alternately, and as she proceeded the water continued to be supplied drop by drop, so as to render the earth a thick muddy consistency and easy to be scraped out of the pit she was sinking.

In about two hours she had succeeded in making a hole six inches in depth and four inches in diameter. In this she immediately deposited her eggs, four in number, filling up the hole again with the mud she had previously scraped out, and then treading it well in and stamping on it with her hind feet alternately, until it was filled to the surface, when she beat it down with the whole weight of her body, raising herself behind as high as she could stretch her legs and then suddenly withdrawing them, allowing herself to drop heavily on the earth, by which means it was speedily beaten flat, and so smooth and natural did it appear that had I not detected her in the performance of her task I should certainly never have noticed the spot where her eggs were deposited. She did not immediately leave the place after finishing her work, but remained inactive, as if recovering from her fatigues.

In about four hours she had dug the hole, deposited her eggs, replaced the earth, and retired to feed.

The length of time required to bring the eggs to maturity cannot be ascertained however, as the males continued to have free intercourse with her during the whole period of the rains, which as I have already stated, was from the latter end of June, to the middle of October; therefore she may have conceived any time during that period.

The female considerably exceeds the male in size and can moreover be distinguished by the flatness of the under shell, whereas the male has that part very concave, and indeed without this formation he would be unable to couple with the female from the convex form of her carapace.

As they are constituted however, the concavity of his under shell, corresponds to the convexity of the upper shell or carapace of the female. The flattened form of the plastron of the female, may possibly be for the purpose of giving greater internal space for the ova.

As the cold season approached they became more sluggish, seldom leaving their retreats, and at the beginning of December 1833, they

remained altogether motionless, refusing to feed. They made no attempt to burrow in the ground, as the Greek Tortoise *(Testudo Græca)* is said to do, but thrust themselves in among the coarse grass which was heaped up in a corner of their enclosure. Until the 9th February 1834 they remained in a state of lazy, listless repose, having never stirred from the spot they had chosen full two months before. They were not however in a state of torpidity, but merely lying inactive as if they thought it too much trouble to move. When taken up they partially put forth the head to ascertain the cause of their being disturbed, but even if placed full in the sun's rays and left so all day, they never made the slightest attempt to move from the spot; as if they felt instinctively that the season in which their services were intended to be of use in the general economy of nature had not yet arrived.

The 9th, 10th and 11th days of February being cloudy with a few showers of rain, the Tortoises came forth and took some lucern, and drank plentifully of water. They did not continue to come out, but relapsed into their former repose, nor did they venture forth again in the evening until the hot season had commenced, or about the middle of April. The winter of 1834 proved much milder than that of the preceding year, and the Tortoises in consequence continued to come forth for their supply of food,—but instead of doing so in the evening as in the hot weather, they chose the middle of the day, remaining out for two or three hours basking in the sun, and retiring again to concealment in the afternoon. Sometimes the males did not come forth for a day or two, but the females were to be seen every day placing themselves close to the white walls of their enclosure, as if conscious that the rays of the sun would be thrown from it upon them.

The marking of the shells is the same in both sexes, and they are only to be distinguished by the difference in size and structure already mentioned, and in the unequal length of tail, that of the male being about twice the length of the female, the latter indeed possessing almost none.

In different individuals the yellow rays vary much in breadth, some having them broad, others narrow.

Both have the same number of scutella on the carapace which consists of thirteen pieces on the disc and twenty-three marginal, while the plastron or under shell contains fourteen pieces.

The length of shell in the female is 10 inches, that of the male from 8 to $8\frac{1}{2}$ inches; if measured longitudinally over the carapace the length of the female is 13 inches and the male from $11\frac{1}{2}$ to 12 inches. The scutella are black with yellow rays diverging from a yellow square

in the centre of each; each scutellum is also deeply striated or groved concentrically, and has a squarish form at the base.

The fore legs are well protected with strong nails or horny tubercles studded all over them, and the feet are all armed with solid nails, 5 on the fore feet and 4 on those behind. The skin is greyish black and the studs yellowish.

In July 1834, one female weighed $5\frac{1}{2}$ lbs.
——— ditto ditto, ... $5\frac{1}{2}$ lbs.
Old male, ... 3 lbs.
A male, ... $2\frac{1}{2}$ lbs.
——— ..... $2\frac{1}{2}$ lbs.
——— ..... 2 lbs,

} a slight difference in size in the males.

The sexual organs of both are situated in the anus, the male having the power of exserting his, which is of large size.

The eggs of the Geometric Tortoise are pure white, of an oblong oval form, the ends being of equal size, and not smaller at one extremity as in the eggs of birds.

The shell is thin, and one inch and 8 lines in length and 4 inches in lateral girth. Those deposited in the earth as above mentioned were allowed to remain in the hope of seeing them hatch, but in the warmth of April 1835 somebody or something stole them and disappointed me.

As they increase in age, they lose the beautiful radiated appearance of the shell, and indeed it frequently peels off in scales even when they are in their prime.

I have an old male which has lost the yellow rays or rather which has lost the whole of the outer coating of the shell and is now of a dirty yellowish colour, the carapace being cracked and divided so irregularly, as to render it somewhat difficult to recognise the true divisions of the scutella. One of the females has also lost the outer coating of one or two scales, while in other respects she is quite perfect.

These animals when handled, will generally either from fear or as a means of defence, squirt out a quantity of water in a pretty strong stream from the anus.

I have read that the combats of the males may be heard at some distance, from the noise they produce in butting against each other. This was never the case with the Geometric Tortoises, although mine had frequent fights,—but these instead of butting, consisted merely in trials of strength, one male confronting another, with the head and fore-legs drawn into the shell, and the hind feet planted firmly on the ground, and in this manner shoving against each other until one or

both became fatigued. This was done chiefly when they wanted to pass each other in any narrow space, and sometimes if the one could succeed in placing his shell a little beneath the other, he tilted him over on his back, from whence he had great difficulty in recovering himself, and I have frequently found them sprawling thus, making desperate efforts with head and feet, to throw themselves back to their natural position, which they were unable to effect unless the ground chanced to be very uneven, so as to assist them.

In this kind of warfare the females also frequently indulged, and from their superior size and strength generally accomplished their wishes.

In farther illustration of the acknowledged strength of the shell in this tribe, I may mention that a party of officers on a shooting excursion, perceived some creature crawling among the high jangal grass, and not seeing distinctly what it was, fired a ball at a venture, which took effect on the front of the carapace, merely making a dent by chipping off the outer coating and causing no farther injury. This was the female which produced the eggs already mentioned.

I have an old work on Natural History, but by whom written I cannot ascertain, as the title pages are torn out, in which it is stated, on the subject of Land Tortoises, "that even the act of procreation, which among the animals is performed in a very few minutes, is with them the business of days. About a month after their enlargement from a torpid state, they prepare to transmit their posterity; and both continue joined for near a month, together."

Whether this be really the case with some species of Land Tortoise or not, I cannot presume to say, but as regards the Geometric Tortoise it is decidedly erroneous, these animals passing about a quarter of an hour in conjunction, when, as I have stated, the male having appeased his desire, dismounts and retires. They return to the females however, several times during the course of the day, and continued to do so throughout the rainy season. Although they mount several times during the day, the female does not admit them each time.

In No. 29 of Loudon's Magazine of Natural History, at page 652, there occurs the following possage, "White mentions it as reported of the Land Tortoise, that it is occupied one month in completing one *féte d'amour;* and this leads me to mention that I was more than once informed in Jamaica that the male and female turtle remain coupled during the period of nine days*."

* W. Sells, Surgeon M. R. C. S., Kingston, Surrey.

Now as I have already shown that this habit does not hold good with *all* the species, I venture to ask, to what species of Land Tortoise do the foregoing quotations apply, and on whose authority is the assertion?

With regard to the turtles it is likely enough to be the case, and I believe the fact is well authenticated, not only with regard to their remaining coupled several days, but also that the male embraces the female with such strength, that she cannot shake him off. The old work above mentioned, says, the sea turtles, "couple in March and remain united till May." ! !

In the water it would matter little, as they would not lose the power of locomotion,—but with the land tribe it is widely different, as the male when mounted, is at the full stretch of his hind legs, and could not walk with the female, for even if she move ever so little during the time of connection, he has great difficulty in maintaining his position, and is often fairly rolled over on his back. As to their lying still for a month with a fine green vegetation springing up all round them after having fasted for some months,—it is I think rather unquestionable. TANTALUS himself was not in a worse predicament ! !

There is still another character assigned to the land tribe which in the present species does not hold good; viz. in STARK'S Elements of Natural History, it is stated that the females are to be distinguished from the males by their under shell or plastron being *convex*, while in the latter it is *concave*.

In the Geometric Tortoise the plastron of the female is *flat*,—that of the male concave.

Were the plastron convex, the animal could not rest quietly on a plane surface, but would pitch, "fore and aft," like a ship in a heavy sea, or at all events she would be obliged to rest with one end of the shell tilted into the air.

I may perhaps be censured for laying so much stress on such trifling errors, but as it is alone by true descriptions of the habits, manners, and construction of created beings, that we can ever hope in some measure to comprehend their uses, and the designs and purpose of our Creator in forming them;—I hold the man to be inexcusable who would perpetrate an error however trifling it may seem to be; for if the description is erroneous, it is consequently untrue, and the great object of scientific research is thereby defeated.

Now, although these (to me) seeming errors, may not be such, as regards *some species*, yet taking them in a general view, they are so, and consequently need correction.

The convexity of the plastron, may be a specific, but it cannot be made a generic character.

Soon after my arrival at Simla in March last, the old male died from cold* ; the others lived through the rains well enough, but were not so lively as in the plains, moving about less frequently. One of the females even produced four eggs, but made no hole to receive them as in the former case, shewing plainly that the change of climate was at work upon them ; these eggs I placed under a hen, but in a few days they had disappeared as in the former instance, and whether stolen by my servants or by some small animal I could not discover.

The winter has proved too cold for the remaining tortoises which are dying fast, and of my seven pets I have only three alive, and I fear I shall be unable to save them.

VI.—*Barometrical Elevations taken on a journey from Katmandhu to Gosainsthán, a place of pilgrimage in the mountains of Nipál, by* Chhedi' Lohar, *a smith in the employ of Captain* Robinson, *late commanding the Escort of the Resident in Nipál.*

The following table was placed in our hands by Captain Robinson, before his departure to Europe. It is curious as shewing to what good purposes the natural intelligence of uneducated servants, especially those of the mechanical classes, may be applied in judicious hands. Chhedi' had acquired skill in the manufacture of guns, gunlocks, and any articles after European models ; he had learnt to boil barometers, and note daily observations for his master's meteorological journal before he was sent out on the experimental expedition in which he has acquitted himself so well. This journal comprehends times, distances, statistical information, indications of the ब्रामीटर (*brámitar*) and मामीटर (*mámiter*), barometer and thermometer, the aspect of the sky, धुपबदरी पानी (*dhup-badarí-páni*) sun-clouds-rain, as he terms it ; and such other items of information as he thought worthy of notice. As a specimen of the mode in which his memoranda are booked, we quote the commencement of the journal, making use of Roman characters for want of the common *Kaithí* type.

* The Bheels clean the shells of these animals from all flesh and the bones of the neck and legs, and stopping up one end with wood, use them as boxes to keep tobacco in !

Trísulígangá gosáiṉkuṇḍ se níkalí hæ*.

Gosáiṉkuṇḍ 3492 kadam cháro taraf se hæ: wao purab pacchím lambá hæ: utar dakhín chhoṭa hæ: huá sè ganèsthán andáj se 1½ kos hæ: huá ek gaṉès kí murat hæ pathar kí: wao ganw ghar kuchh nahí hæ: huá se Lohríbinae 2 kos hæ: huá jètnè ádmí láṭhí léké jaté hæ:: so láṭhí huái rakhdènè paṛta hæ: laṭhí ka ek baṛa ḍherí hæ: wao kuchh ganw ghar nahí hæ: huá se Dhímsá ganw 3 kos hæ: Dhímsá ganw me 29 ghar hæ moṭiá ká: huá se 2½ kos hæ Trisulígangá; pahár utar ke níche Trisulígangá míltí hæ. Trisulígangá se 1½ kos hæ Dhunchá ganw: 56 ghar hæ moṭiè ka; huá se Ṭharheá ganw 4 kos hæ, &c.

Translation of the journal.

The *Trisulígangá* issues from the Gosain's kund or well. This well is 3492 paces round its four sides, the length being east and west and the north and south (breadth) is small. From thence by estimate the temple of Ganèsh is 1½ kos. There is one stone image of Ganèsh, but neither village nor house of any sort. Thence *Loharíbináek* is 2 kos (distant), where all those who travel with *laṭhis* or sticks are forced to leave them. There is great delay (a large crooked stick?) about these sticks, but neither village nor house on the spot. Three kos farther on comes *Dhimsa* village, containing 29 houses of labourers (load-carriers). At 2½ kos beyond the *Trisulígangá* is met with at the south foot of the hill. From the river at 1½ kos comes the village of *Dhunchá*, containing 56 houses of carriers:—thence at 4 kos, *Thárhea* village having 11 houses. Then Karang 2 kos off, with 7 houses. 4 kos further *Kakarea* a village of 10 houses, inhabited by *Newars* and hill-men. Thence 3 kos to *Dhœmu ganw*, containing 47 grass huts of Newárs and Parbattiahs. There is one pakka dwelling belonging to the *rájguru*. Thence to the bank of the *Bèta-rawtí nadi* is 2½ kos; there are 8 banias' shops and one pakka temple, below which two rivers flow: the *Trisulígangá*, the *Betarawtí*: the former coming from the north proceeds southward, its waters appear somewhat green to the sight, and flow with great violence. The *Betarawtí*, a smaller stream, comes from the east and joins the other beneath the walls of the

* We use æ after the continental savans to represent the diphthong ै or ॅ in contradistinction to *ái* which is required for ा ि of common occurrence in Hindí. In the same manner œ would represent the compound vowel ो formed of *o* and *e*, but as the pronunciation would be apt to deceive, *ao* is perhaps the best representative of this diphthong. There should be a nasal *n* after *gosain*, and after the *u* of *kund*, well, also in *cháron*, *huá* (for *wahán*) and similar words mis-spelt by the mistree.

mandir (or temple). Its water has a somewhat yellow colour. Over this river we have to pass by a rope bridge of 42 cubits span at the ghat. The stream is 4 cubits deep and very rapid. Hence to *Brahmankí patí*, 1 kos: to *Nyákoṭ*, 4 kos. On the ascent to *Nyákoṭ* is a small hill, westward; on arrival there, is a bridge over the *Trisulígangá* and General BHIMSEN's garden with barracks for two companies of sipáhis. There also is the road to *Palpa**: from which mountain every thing can be seen. And in the town of *Nyakoṭ* are a great many *deotás* (images). But on the west of the town is a temple of *Bhæro*, the roof which is coated with brass; and near the rája's house two towers (*koṭ*) are built exceedingly high, of six stories. The fourth (*chhaotha*? *6th*) story is of wood: : so these two towers and the temple of *Bhæro* are visible a great way off. And there are in the town of *Nyakoṭ* two *mohlas* (*? talao's*), one named *Asiwáriṭol*, the other *Bhærágtol*. And the *Trisulígangá* flows beneath the town on the west, over it is a wooden bridge. It is 10 cubits deep at that spot. The bridge is raised 16 cubits, and has a span of 83 cubits; it is very old, but the force of the current is here so great that unless a bridge existed it would be impossible to pass over. From *Nyakoṭ* to the *Surujmati* river is 2 kos towards the south-east corner: broad 64 cubits, deep $3\frac{1}{4}$ cubits, of great velocity: it is passed with a ferry-boat. On this side are two *paṭís* (?) and a bania's shop. Thence to *Dumarichawr* (or *Dungrichaura*) is 3 kos; where are one patí and a bania's shop. Thence to *Keṭikapuá*, $1\frac{1}{2}$ kos. Half way is a village named *Baṛamandí*: *Ketika puwa* is ruined and not fit to stop at; nobody rests there. Thence to *Ránikapuwa*, 1 kos. This is also decayed (*ṭuṭa*) and nobody stops at it. Then comes *Jáfir ka puwa*, 1 kos. At this place on an insulated hill stands the house of the *baṛa sáhib* (the resident) and thence it is called the *Angrej ka puwa*; and in *Jáfir ka puwa* are many business-like people—eatables and drinkables are to be had. Thence to *Basnáth ka puwa* is half a kos, and half a kos further is *Khola*: thence to *Jasarám ka puwa*, half a kos; and then a second *Khola*, $\frac{1}{2}$ a kos. *Chamubasnáth ka puwa*, $\frac{1}{2}$ kos; *Jitpurphedí*, 1 kos. Thence to *Nepál-faringé ke chooní* (the English residence) four kos: making altogether from *Katmandhu* to *Gosainsthán*, 47 kos.

Then follows the register kept in a tabular form, to which we have only added one column expressing the appropriate height of each station relatively to *Kátmandhu*.—ED.

* Perhaps *paháṛpar jáne ka ráṣta*, 'road to the mountains,' or the pass into Tibet. This reading is supported by the next sentence, *so us paháṛ par se sab najar awta hæ*.

Year 1836, *month, August* 26*th, Friday, (all night of the* 25*th rain and snow fell.)*

Hour.	*Station.*	*Barom.*	*Therm.*	*Weather.*	*Approximate altitude in feet.*
6 A. M.	Gosainsthán	24,744	42	clear	620 above Katmandhu.
8	Ganeshsthán	24,660	57	sunshine	710 ditto.
10	Lohari binae	24,383	66	ditto	1,000 ditto.
3 P. M.	Dhimsagaon	24,346	61	rain	
6	ditto	24,272	60	ditto	
Saturday 27th					
6 A. M.	ditto	24,266	57	clear	
11	ditto	24,540	71	cloudy	920 ditto.
4 P. M.	ditto	24,506	67	rain	
6	ditto	24,480	66	clear	
Sunday 28th					
6 A. M.	ditto	24,478	62	cloudy	
11	Thariah	24,496	64	ditto	880 ditto.
2½ P. M.	Kerang	24,376	66	clear	1,010 ditto.
7	Kakeria	24,968	71	cloudy	400 ditto.
Monday 29th					
6 A. M.	ditto	24,936	68	ditto	450 ditto.
8	Dhæmu hill	24,750	71	ditto	610 ditto.
9	Dhæmu village	26,996	79	rain	2,100 below ditto.
12	level of the Betaraoti river	28,240	87	bright	2,900 ditto.
1 P. M.	Bâhman ke pati	28,420	88	ditto	
3	Nyakot ascent	27,338	76	rainy	2,000 ditto.
5	ditto town	26,958	79	clearing	
Tuesday 30th					
7 A. M.	Nyakot	26,984	77	cloudy	1,700 ditto.
10	ditto	27,140	82	sunshine	
12	ditto	26,990	82½	ditto	
3 P. M.	Pati or Dharmsála on Surjmati river	28,314	81½	hard rain	
6	ditto	28,340	82½	raining	2,900 ditto.
Wednesday 31st					
6 A. M	ditto	28,350	80	cloudy	
10	Dumrichaor-pati	27,160	79	ditto	1,860 ditto.
12	Ketikapawa	25,829	76	clear	500 ditto.
1 P. M.	Rani ke powa	24,750	68	cloudy	610 above ditto.
2	Jáfir ke powa	24,674	70	ditto	700 ditto.
3	Basnáth ke powa	24,740	67	ditto	620 ditto.
3½	Khola below do.	25,130	69	ditto	210 ditto.
4	Jasrám ka powa	24,766	65	raining	600 ditto.
4½	Khola below do.	25,660	71	cloudy	350 below ditto.
5	Chamuatbasnath	24,934	73	ditto	420 above ditto.
6	Jitpurphedi	25,546	75	clearing	230 below ditto.
Thursday 1st September					
8	Nipal residency	25,330	72	cloudy	4,400 feet above Calcutta.

" Likha Chhedí mistrí loharne, nokar Jaj Hedrí Raminsen Kaptan ka, &c." *i. e.* written by CHEDI' the smith, in the service of GEORGE HENRY ROBINSON, Captain, &c. &c.

VIII.—*Meteorological Register kept at Darjiling, for the month of April*, 1837. *By Dr.* H. CHAPMAN.

Day.	Barometer. 10 A. M.	Barometer. 4 P. M.	Therm. in Air. 10 A. M.	Therm. in Air. 4 P. M.	Moist. Bulb. 10 A. M.	Moist. Bulb. 4 P. M.	Regtg. Ther. Min.	Regtg. Ther. Max.	Daul. Hygr. 10 A. M.	Daul. Hygr. 4 P. M.	Rain. Inches	Wind. Morn.	Wind. Even.	Appearance of the Sky. Morning.	Appearance of the Sky. Evening.	Boiling Point, at 10 a.m.
1	23.327	23.232	59.5	57.5	50	47.5	44	60.5	50	43	..	Calm.	W.	Thick hz.mr.hor.above cl.	Thick hz.c.NW.	199.6
2	.338	.227	59	43	50	40	44	60.5	46	39	..	N.	Variable.	Ditto	Thunder storm.	199.7
3	.273	.203	46	50	42.5	47	38	52.5	42.5	47	0.85	S.	W.	Overcast Cum. and mist occas. sunshine.		199.7
4	.265	.200	50	51	47.5	47.5	40	52.5	47	47.5	0.23	Calm.	S. W.	Generally overcast.	Overcast.	199.6
5	.281	.198	55	53.5	51	50	44	56	51	49.5	..	W.	W.	Cum. near hor. ab. cl.	Cum. S. Mist N.	199.8
6	.276	.187	56.5	60.5	51	53.5	44	60.5	51	53.5	0.16	Calm.	W.	Cum. intspsd.	Cum. intspsd. sunshine.	199.8
7	.288	.192	58	58	54	53.5	46	60	53.5	53	..	N.	W.	Horizon hazy, above clear.	Cum & haze.	199.5
8	.278	.173	58.5	59	55	52.5	49.5	64	55	52.5	..	Calm.	S.	Cum. intspsd. hazy N.	Heavy clouds S.	199.7
9	.307	.237	61	59.5	50	52	48	65	44	52	..	W.	W.	Hor. hazy ab. cl. Ovrt.	Thud. Stm. N.W.	200.0
10	.273	.167	52	51.5	50	47	44	55	50	46.5	0.31	Calm.	W.	Fog.	Cirri. and cirri. strat intspsd.	199.7
11	.234	.183	55	60.5	53	53	43	62	52.5	52	0.03	Do.	W.	Cum. S. & S. E.	Hazy Cum. intspsd.	199.7
12	.318	.269	62.5	62	54	55	49	63.5	53	54	..	N. E.	W.	Hor. hazy cum. S. rest cl.	Cirri. & cum.	199.7
13	.355	.245	63	62	55	55	49	66	55	56	..	Calm.	W.	Hazy cum. intspsd.	Thick haze cumuli.	199.8
14	.313	.225	62.5	62	56.5	56	50	66	54	56	..	Do.	W.	Ditto ditto.	Ditto ditto.	200.0
15	.265	.184	65.5	65	54	53.5	52.5	67.5	50	50	..	W.	W. S. W.	Horizon hazy, rest clear.	Thick haze.	199.7
16	.305	.229	65.5	63.5	54	51	52	68	45	45	..	Calm.	W.	Ditto ditto.	Ditto.	199.8
17	.340	.224	64.5	65	54.5	55	51	67.5	51 5	55	..	Do.	Calm.	Thick haze.	Ditto.	200.0
18	.276	.192	64.5	63	55	55.5	51	68	50 5	54.5	..	Do.	W. light.	Do. few cum. intspsd.	Do. cum. intspsd.	199.5
19	.253	.192	64	59.5	58	55.5	51	65	58	55.5	..	Do.	S. light	Cum. S. thick haze.	Cumuli rain.	199.8
20	.290	.200	62.5	59.5	57.5	57	50.5	62	59.5	58	0.04	S. E. light.	W.	Overcast.	Overcast & occasional Mist.	200.0
21	.256	.150	61	64	59	57	50	64.5	59	56	0 03	Calm.	W. strong	Partlly.ovt.	Overhead cl. Thunder stm. S.	199.7
22	.312	.245	69.5	64.5	58	56.5	50	70.5	56	55	..	W. light	W.	Clear.	Cumuli and haze.	199.7
23	.400	.333	67.5	63	52	50	50	68	39	44	..	W.	S. W.	Horizon hazy, above clear.	Thick haze.	200.0
24	.460	.396	63.5	64.5	46	48	50	64.5	34	41	..	S.	W.	Thick haze.	Ditto.	200.2
25	.434	.356	64	65	52.5	54	51	66.5	44.5	50	..	Calm.	W.	Ditto.	Ditto.	200.2
26	.428	.348	68.5	64.5	56.5	55	51	68.5	51.5	51	..	Do.	W.	Ditto.	Ditto.	200.2
27	.432	.357	64 5	64	55	53	52	66	52.5	48	..	Do.	W.	Ditto.	Ditto.	200.0
28	.416	.328	64.5	65	55	56	52	68.5	52.5	52	..	N.	W.	Cum. intspsd thick hze.	Do. cum.intspsd	199.8
29	.357	.240	63.5	62.5	58	56	52	66	57	55	..	N.E. light	SSW.	Ditto.	Do. light rain.	199.7
30	.315	.206	56	64.5	48.5	57.5	46	65.5	48	55	0.28	S.	N.	Overcast, storm to S.	Heavy clouds S.W.	199 5
Mns	23.322	23.237	60.9	60.2	53.1	52.7	48.1	63.7	50.4	50.9	1.93					199.80

Meteorological Register kept at Darjiling, for the month of May, 1837.

Day.	Barometer. 10 A. M.	Barometer. 4 P. M.	Thermometer 10 A. M.	Thermometer 4 P. M.	Moist. Bulb. 10 A. M.	Moist. Bulb. 4 P. M.	Regtg. Ther. Min.	Regtg. Ther. Max.	Dan. Hygrom. Dew-point. 10 A. M.	Dew-point. 4 P. M.	Rain. Inches	Wind. Morn.	Wind. Even.	Appearance of the Sky, &c. Morning.	Evening.	Boiling Point, at 10 A. M.
1	23.362	23.240	61	57	56.5	53	48	62.5	56.5	52.5	..	N. E.	S. W.	Cloudy.	Storm, raining.	200.0
2	.368	.280	60	61.5	54.5	51	45	65	53	47	0.14	W. W.	brisk.	Cum. S. & W.	Cloudy N. & N. W.	200.0
3	.362	.268	60	55.5	53	52	48	62	53	53.5	09	S.light	S.W.lig.	Cloudy near hor.	Ovrst. thund. storm N.	199.8
4	.295	.188	51	49.5	47.5	44.5	38	55.5	47.5	44.5	1.42	N. E.	W.	Generally clear.	Gy. Overcast.	199.7
5	.330	.260	53	52.5	47.5	49	38	54	47	48	14	N. E.	W.	Cumuli collecting.	Overcast light rain.	199.7
6	.348	.280	54.5	56	50	52.5	43.5	56	50	52.5	01	W.	S. W.	Overcast.	Genly. overcast.	199.7
7	.391	.327	58	63	54	57.5	48.5	63	54	57	..	Calm.	W.	Genl. overcast.	Cumuli N. & N. W.	200.0
8	.353	..	58.5	..	56	..	50	..	56	..	..	Do.	..	Ovrt. & foggy.	Storm gathering S. W.	200.0
9	.350	.252	60.5	59.5	57	55.5	49	62	57	55.5	1.00	W.	S. S.W.	Ovrt.	Cumuli S. & W. rest clear.	199.7
10	.364	.260	61	58	54	53	45	63 5	53	53	09	W. light.	S. W.	Cirri intspsd.	Heavy clouds W. & S.W.	199.8
11	.327	.214	59.5	57.5	54	54	47.5	62 5	54	54	..	N.	W.	Genl. clear.	Do. N. W. storm gathering.	199.6
12	.340	194	62	56	55.5	52.5	47.5	63	55	52.5	19	Calm.	W.	Cum. near horizon.	Thunder storm to W.	199.8
13	.265	.173	61.5	59	56	54	48	62	56	55	34	W.	W.	Ditto.	Clear to N. rest overcast.	199.5
14	.269	.182	59	57	56	54	49	60	56	55	02	Calm.	S. W.	Horizon cloudy.	Overcast light rain.	199.5
15	.286	.214	61	61	57.5	56.5	50	61.5	57.5	56.5	26	Do.	S. W.	Genl. overcast.	Horizon cloudy, above cl.	199.5
16	.280	.210	60.5	61	59	57.5	48.5	62.5	59	58	30	Do.	W.	Horizon cloudy, rest clear.	Ditto.	199.5
17	.324	.235	66	65	59.5	59	51 5	69	58.5	57.5	..	S. W.	W.	Ditto ditto.	Ditto cumuli to S.	199.7
18	.307	.202	64	63.5	58 5	57.5	51.5	68	57	57	..	Calm.	W.	Cumuli intspsd.	Cumuli intspsd.	200.0
19	.270	.158	64	60	58.5	57	52	66	58	57	..	Do.	S.	Hor. clouded, ab. cl.	Storm to S. & N. W.	199.7
20	.245	.158	62	59	58.5	57	50	62.5	58.5	57	37	Do.	S. W.	Fog.	Overcast.	199.6
21	.247	.154	61.5	56	59	54	52	62	59	54	02	Do.	Variable.	Fog. at intervals clear.	Rain, storm N.E.	199.5
22	.268	.200	62	62	57	59.5	49	64	57	59.5	38	W. S. W.	W.	Horizon cloudy.	Horizon cloudy.	199.5
23	.291	.206	64	63	60.5	59	53.5	64.5	60.5	59	..	Calm.	S. W.	Ditto.	Ditto.	199.6
24	.273	.227	64	63	59.5	60	52	65	59	60	40	Calm.	W.S.W.	Ditto.	Clear.	199.5
25	.318	.245	64.5	62.5	61.5	59.5	54	65.5	61.5	59.5	04	Do.	S. W.	Ovrst. mist in the vallies.	Cumuli intsps.	199.8
26	.352	.292	64.5	61	62	59	55	64.5	62	59	10	Do.	Calm.	Fog in the vallies.	Rain fog in the vallies.	199.7
27	.307	.216	63.5	63.5	60	60.5	55	66.5	60	60.5	11	Do.	S. W.	Ditto.	Overcast ditto.	199.7
28	.273	.185	66	63	62	61	55	67	62	61	06	Do.	W.	Partially overcast.	Showers.	199.8
29	.208	.128	64.5	63	62	61.5	57	65.5	62	62.5	04	Do.	S. W.	Fog.	Fog.	199.3
30	.184	.136	66	65	64	63.5	58	66.5	64	63.5	06	Do.	W.	Ditto.	Overcast and raining.	199.3
31	.225	.178	67.5	64.5	65	64	60	68	65	64	58	Do.	Calm.	Genl. overcast, fog in vallies.	Do. & fog.	199.3
Mns	23.303	23.215	61.4	60	57.3	56.3	50	63.3	57	56.2	6.16					199.67

May 8th at Ging about 4 miles N. N. E. of Darjiling 1.30 P. M. Barometer 24.876, Thermometer 69° : boiling point of water 203.5.

Meteorological Register kept at Darjiling, for the month of June, 1837.

Day.	Barometer. 10 A. M.	Barometer. 4 P. M.	Thermometer 10 A. M.	Thermometer 4 P. M.	Moist. Bulb. 10 A. M.	Moist. Bulb. 4 P. M.	Regtg. Ther. Min.	Regtg. Ther. Max.	Dan. Hygrom. Dew-point. 10 A.M.	Dew-point. 4 P.M.	Rain. Inches	Wind. Morn.	Wind. Even.	Appearance of the Sky, &c. Morning.	Appearance of the Sky, &c. Evening.	Boiling Point, at 10 A.M.
1	23.204	23.108	64	65.5	63	63.5	59	66.5	63	63.5	0.03	W.	S. W.	Generally clear.	Cumuli intspsd.	199.3
2	.160	.080	65.5	68	61.5	63	57	68	61.5	63	..	W.	W. S. W.	Cirri. intspsd.	Horizon cloudy.	.3
3	.202	.155	64.5	67	60.5	62	54	68	60.5	62	..	N. E.	W.	Cumuli intspsd.	Cumuli intspsd.	.3
4	.271	.220	69	69	60	60	55	71	57	58	..	W. S. W.	S.W.	Clear.	Generally clear.	.3
5	.334	.282	67.5	68.5	61.5	62	55.5	69.5	61.5	61	..	S.	Calm.	Ditto.	Cumuli intspsd.	.6
6	.315	.224	66	59.5	61	55.5	54.5	66.5	60	55.5	..	W.	S. W.	Partially overcast.	Overcast & raining.	..
7	.286	.220	64.5	64.5	60	60	51.5	68.5	60	60	33	S. W.	W.S. W.	Ditto & light haze.	Generally clear.	.3
8	.346	.258	56	62.5	55	60	55	64.5	55	60	82	W.	S.	Genl. ovrt.thud. storm at 9.	Cum. intspsd.	.7
9	.330	.238	64.5	62.5	60	60	56	66	60	60	03	S. W.	W.S. W.	Generally overcast.	Overcast.	.7
10	.276	.204	59	62.5	58	60.5	54.5	64	58	61	31	S.	S. W.	Overcast.	Overcast & occly. fog.	.3
11	.268	.198	64	62	61.5	61	53	65.5	61.5	61	34	WS.W.	W.S.W.	Horizon cloudy, above clear.	Genl. clear	.3
12	.281	.218	64	63.5	61.5	60.5	54	67	61.5	61	11	N. E.	S. W.	Partially overcast.	Cloudy, storm S. W.	.3
13	.292	.188	63	64.5	59.5	61	55.5	66	60.5	60.5	03	N. E.	S. W.	Overcast.	Genl. overcast.	.3
14	.212	.148	64	65	62	61	55.5	66.5	62	61	22	Calm.	S. W.	Horizon cloudy.	Cloudy S. & W.	.3
15	.194	.142	65.5	66.5	60	62	55.5	68	60	61	02	Do.	S. S. W.	Ditto.	Cloudy.	.2
16	.172	.100	67.5	66	64	63.5	56.5	69	64	63.5	08	Do.	S. W.	Cloudy.	Clouds intersp.	.2
17	.167	.118	66	66.5	63	64.5	57	69.5	62.5	64.5	..	Do.	S. S. W.	Horizon cloudy, rest clear.	Genl. Ovit.	.2
18	.197	.098	66.5	68	63.5	66	59	68.5	63	66	..	S. W.	S. W.	Genl. heavy clouds S. & W.	Ditto.	.3
19	.225	.175	66.5	64	64.5	62.5	58	67.5	64.5	62.5	04	Calm.	W.	Fog. Cloudy, showers, distant thunder W.		.3
20	.323	.280	69	63.5	58.5	62	53	65	58.5	62	1.01	N. E.	Calm.	Overcast, and raining.	Overcast.	.5
21	.392	.322	63	62.5	60.5	61.5	56	66	60.5	61.5	0.15	N. N. E.	Do.	Overcast & thin fog.	Ditto.	200.0
22	.352	.260	61	61	59.5	60	55.5	64	59.5	60	78	W.	W. S. W.	Ditto ditto	Overcast and rain	199.8
23	.260	.180	63.5	63.5	61	61.5	55	64	61	61.5	08	WSW.	WNW.	Cloudy.	Overcast.	.3
24	.194	.118	65.5	65	62	63	57	66.5	61.5	63	07	Calm.	S. W.	Overcast.	Overcast & occlly showers.	.2
25	.163	.107	66	63.5	63	62.5	58	67	62.5	62.5	..	Do.	S. W.	Ditto.	Ditto.	.2
26	.153	.104	64	63.5	63	63	57.5	65	63	63	44	W.	S. W.	Ditto and fog.	Do. & fog.	199.0
27	.154	.093	63.5	64.5	62	63	57	65	62	63	07	Calm.	N. W.	Fog & light rain.	Fog.	.2
28	.142	.093	66	63.5	64	62.5	57	66.5	64	62.5	78	Do.	Calm.	Ditto ditto.	Rain & fog.	.2
29	.150	.123	60.5	63	60	62	56.5	64	60	62	5.13	Do. W.	S. W	Fog&light rn.(hvy.rn.til.10A.M.)	Rn.&fog.	.2
30	.187	.130	62.5	67	61.5	65.5	56.5	67	61.5	65	72	N. N. E.	Calm.	Overcast and foggy.	Partially overcast.	.3
Mns	23.240	23.173	64.1	64.5	61.2	61.8	55.8	66.7	61	61.7	11.59*					199.33

* Quantity of rain by Crosley's registering Pluviometer, 12.62 inches.

Meteorological Register kept at Darjiling, for the month of July, 1837.

Day.	Barometer. 10 A. M.	Barometer. 4 P. M.	Thermometer 10 A. M.	Thermometer 4 P. M.	Wet Bulb. 10 A. M.	Wet Bulb. 4 P. M.	Dan. Hygro. Dew-point. 10 A. M.	Dew-point. 4 P. M.	Regtg. Ther. Min.	Regtg. Ther. Max.	Rain. Inches	Wind. Morn.	Wind. Even.	Appearance of the Sky, &c. Morning.	Appearance of the Sky, &c. Evening.	Boiling Point, at10 A.M.
1	23.230	23.150	65.5	66.5	63.5	65	63.5	65	56.5	67	0.42	N. E.	W.S.W.	Cloudy.	Cloudy.	199.4
2	.204	.138	66.5	65	65	64	65	64	57	68	17	Calm.	S.	Cloudy S. & W.	Cloudy S. & W.	.3
3	.212	.170	65	62	63.5	61.5	63.5	61.5	57.5	66	1.34	N.	S.	Light rain and fog.	Overcast.	.4
4	.238	.180	64.5	64.5	63	63	63	63	57.5	65	50	N. N. E.	Cm.	Thin fog.	Genlly. overcast & light rain.	.4
5	.227	.175	62.5	64.5	61.5	63.5	61.5	63.5	57.5	64.5	14	N. E.	Do.	Generally overcast.	Rain.	.2
6	.217	.150	64	63.5	62.5	62.5	62.5	62.5	56	65.5	99	N.	Do.	Light rain.	Rain and fog.	.2
7	.190	.117	63	63	62.5	62.5	62.5	62.5	57	65.5	95	E.	S. W.	Overcast and fog.	Rain.	.2
8	.136	.056	67	64.5	64.5	63	64.5	63	57	67	51	S. W.	N.	Overcast.	ditto.	.2
9	.068	.004	61	63.5	60	62.5	60.5	62.5	57	64.5	1.91	N. E.	Calm.	Heavy rain.	Clearing to S.	199.0
10	.050	22.980	65	66.5	63.5	65	63	65	58	67	1.21	S. W.	Do.	Rain.	Light rain.	198.8
11	22.988	.929	65.5	67	65	66	65	66	59	68	.03	S. W.	S. W.	Rain and fog.	Heavy rain.	.8
12	.960	.944	62	62	61	61	61	61	59	64	2.70	S. W.	S. W.	Rain.	Rain.	.8
13	23 098	23.084	64.5	63.5	62.5	61.5	62.5	61.5	55.5	65	1.27	W.	S. W.	Overcast.	Overcast.	199 .0
14	.226	.192	66.5	62.5	64	61.5	64	61.5	57	67	1.08	Calm.	S. W.	Ditto.	Rain.	.3
15	.289	.225	63	63	61.5	62	62	62	57	65	1.01	S. W.	W.S.W.	Fog.	Overcast.	.5
16	.202	.111	64.5	63	63	62	63	62	58.5	67.5	24	W S. W.	S.	Generally overcast.	Thick fog&light rain.	.3
17	.141	095	62	63	51.5	61.5	61.5	61.5	58	64	1.04	S. W.	Calm.	Rain and fog.	Clearing.	.2
18	.222	.170	58.5	60	57.5	59.5	58	59.5	56	60	1.10	N.N.E.	N.N.E.	Ditto.	Fog.	.2
19	.258	.184	60.5	63.5	60	63	60	63	56	65	57	S. W.	Calm.	Fog.	Fog and light rain.	.4
20	.203	.130	61.5	62	60.5	61.5	60.5	61,5	57	64.5	1.29	S. W.	S.	Ditto.	Light rain.	.2
21	.206	.154	60.5	63.5	60	62.5	60	62.5	57	64	1.07	S. E.	Calm.	Rain and fog.	Clearing S. rest overcast.	.2
22	.228	.177	63	62.5	62.5	62	62.5	62	57	64	1.06	N.	N. N. E.	Fog.	Rain and fog.	.5
23	.268	.192	66.5	62	65.5	61.5	65.5	62	56.5	67.5	14	Calm.	S. W.	Cloudy.	Rain.	.5
24	.220	.136	65	66	63	64	63	64	57.5	68.5	1.32	Do.	Calm.	Ditto.	Overcast and thin fog.	.5
25	.208	.120	67.5	64	65	63	65	63	57	69.5	49	S. E.	S. W.	Cumuli interspersed.	Overcast.	.3
26	.206	.144	66	62.5	63	61	63	61	57	67	81	W.	N.	Cloudy cumuli S. and W.	Ditto.	.3
27	.212	.139	60	62.5	59.5	61.5	59.5	61.5	58	63	41	Calm.	E.	Rain and fog.	Fog.	.2
28	.214	.160	60	61	59.5	60.5	60	60.5	58	61.5	1.88	W. squally.	Cm.	Ditto ditto.	Fog and showery.	.2
29	.223	.150	61.5	63.5	61	63	61.5	63	57.5	63.5	1.06	S. E.	S.	Fog.	Fog and light rain.	.4
30	.216	.137	65	65	63	63.5	63	64	57.5	66	61	N. E.	Calm.	Fog and light rain.	Ditto ditto.	.2
31	.173	.112	65	63	64	62.5	64	62.5	58.5	65	2.63	Calm.	N.	Overcast.	Ditto ditto.	.2
Mns	23.185	23.123	63.6	63.5	62.3	62.5	62.4	62.5	57.3	65.5	31.25*					199.24

On the 28th and several other occasions, dew deposited on the Hygrometer the instant the æther was dropped on the covered bulb. On the same occasion depression of Moistened bulb Thermometer barely perceptible although registered, 0.5.

* Quantity of rain by Crosley's registering Pluviometer, 35.52.

IX.—*Proceedings of the Asiatic Society.*

Wednesday Evening, the 6th September, 1837.

The Hon'ble Sir Edward Ryan, President, in the chair.

Dr. G. G. Spilsbury, Major J. R. Ouseley, and Dr. G. McPherson, proposed at the last meeting were ballotted for, and duly elected members of the Society.

The Hon'ble G. Turnour of Ceylon was permitted on his own request to exchange his position of honorary for that of ordinary member, that he might contribute his share to the support of the institution.

C. G. Mansell, Esq. member, requested that his copy of the Journal might not be furnished at the Society's expence, but that he might be separately charged for the same.

Read a letter from Sir Charles D'Oyly, tendering his resignation as member of the Society on account of his immediate departure from the country, but hoping that his name might be continued as an honorary associate on the list of members to which it had belonged since the year 1814.

The rule does not seem to be generally known, that although members on quitting the country are exempted from contributions, they continue on the list, and in case of return to India recommence their subscription only from their date of arrival.

Lieut. E. B. Conolly, proposed as a member by the Secretary, seconded by H. T. Prinsep, Esq.; D. F. McLeod, Esq. Civil Service, proposed by Capt. Pemberton, seconded by the Secretary.

Read a letter from M. Bedier, Governor of Chandernagore, forwarding the following enclosures from M. Guizot, Minister of public instruction in France.

Paris, le 17 *Décembre* 1836.

Monsieur, J'ai reçu la lettre que vous m'avez fait l'honneur de m'écrire au nom de la Société Asiatique de Calcutta, et celle qui s'y trouvait incluse, de Sir Edward Ryan, Président actuel de cette Société. Je suis très heureux d'avoir fait une chose agréable à la Société en lui offrant un exemplaire du voyage de Victor Jacquemont, et d'un autre côté de pouvoir lui être utile en l'autorisant à faire passer, sous mon couvert, tout ce qu'elle jugera convenable d'envoyer en France, dans l'intérêt des sciences et des lettres. J'attends la caisse que vous m'annoncez avoir expédiée à mon adresse et qui contient des livres orientaux destinés à la Société Asiatique de Paris. J'ai prévenu M. Eugéne Burnouf, de cet envoi, et, desqu'il me sera parvenu, j'aurai soin de le transmettre à sa destination.

Agréez, Monsieur, l'assurance de ma considération très distinguée;

Le Ministre de l'Instruction publique,
Guizot.

Mr. James Prinsep, Sécrétaire de la Société Asiatique de Calcutta.

Paris, le 14 *Février*, 1837.

Monsieur, J'ai su par Mr. Antoine Troyer, de la Société Asiatique de Paris, que vous consentez à surveiller et à diriger la transcription du manuscrite des Védas.

Je vous remercie beaucoup de l'empressement que vous avez mis à seconder les vues de l'administration Française, et des soins que vous donnerez à ce travail.

Mr. le Ministre de la Marine, a bien voulu se charger de vous faire parvenir la somme de 1,500 francs que j'ai affectée aux frais de cette transcription et dont la distribution est confiée également à vos soins; c'est par l'intermédiaire de ce Ministre que vous parviendra, de plus, la lettre que j'ai l'honneur de vous adresser, et je vous engage à recourir à la meme voie toutes les fois que vous voudrez bien correspondre avec mon Département, relativement à l'opération

entreprise sous vos auspices, et qui s'accomplira, je n'en doute point, d'une manière tout-à-fait satisfaisante.

Agréez, Monsieur, l'assurance de ma considération trése distinguée ;

Le Ministre de l'Instruction publique, GUIZOT.

Mr. James Prinsep, Sécrétaire de la Sociéte Asiatique de Calcutta.

The Secretary suggested that although he appeared to be entrusted personally with this important commission he thought it would be on all accounts safer to enter the correspondence on the Society's books, and to place the money on their general account to the credit of the French Government, in case of any accident to himself. He had already taken measures for the furtherance of the minister's views.

Read, extract of letter from Major TROYER, on the same subject.

Capt. TROYER, forwarded account sale of oriental works on the part of the Paris Society, amounting to 1173 *f.* and 8 *cts.* net.

The first 10 livraisons of the work of the late M. JACQUEMONT, are now completed. The whole will consist of 50 livraisons folio, costing 400 francs. No mention is made of his having received charge of the Society's copy.

Library.

The following books were presented.

Madras Journal of Literature and Science, No. 16, for July 1837—*by the Editor,* Dr. COLE.

Uber die Kawi—Sprache auf der Jnsel Java nebst einer Einleitung über die Verschiedenheit des menschlichan Sprachbaues Von Wilhem Von Humboldt, Berlin 1836. vol. I.—*presented on the part of his brother the late Baron, by Mr. Alexander de Humboldt.*

Jonpur námeh and Wakiát Jehangíri—*copied from MS. lent by Capt. A. Cunningham, at an expence of* 12 *rupees.*

Meteorological Registers for June and July 1837—*by the Surveyor General.*

The following were received from the Oriental Translation Fund.

The History of the Afghans translated from the Persian by BERNHARD DORN, Ph. D. For. M. A. R. A. S. M. T. C.

Travels of Macarius, vol. II. translated by F. C. BELFOUR, A. M. OXON, M. R. A. S.

The Chronicles of Rabbi Joseph Ben Joshua Ben Meir the Sphardi by C. H. F. BIALLOBLOTYKY, vol. II.—1836.

Lardner's Cabinet Cyclopedia.—Foreign Statesmen, vol. IV.—*from the Booksellers.*

Mr. AVDALL brought for the inspection of the meeting a very valuable illuminated Armenian manuscript of the New Testament on parchment, written in the year (Arm. Era 741) or A. D. 1292, under the Armenian king HETHU'M.

It was written at Ozopi by a monk named Simeon, sold for 3,000 deniers to Mathews a priest, and afterwards in A. D. 1501 to Hazar Beg for 20,000 deniers.

Nawáb TUHAWUR JUNG addressed a letter to the Society with a manuscript of the *Sharáya ul Islám,* the text book of Mahommedan law according tothe Sheea sect, recommending that it should be printed under the Society's auspices and offering to defray one-half of the expences. Referred to the Committee of papers.

Colonel H. BURNEY, presented for the Society's Library, copy of a practical work on ordinary diseases and medicines compiled and translated into Burmese by a Catholic Missionary and lithographed by himself for gratuitous circulation among the people at *Ava.*

By the same opportunity Col. BURNEY sent up the manuscript of Mr. LANE's Burmese Dictionary, which has immediately been placed in the printer's hands.

Committees.

Dr. STEWART, Secretary of the Statistical Committee reported the result of two applications to the Government of Bengal, one for the privilege

of franking its correspondence, which was accorded as far as regarded the returns from public servants to the Secretary: the second for a specific grant of funds for the prosecution of its inquiries; this was refused under the explanation that a reference from the Society for a grant for general purposes was now on its way to the court, and that statistical inquiries might be regarded as included therein. The Committee also recommended that they should be empowered to associate with themselves any friends to statistical inquiry who might not be Members of the Society.

The Secretary thought with submission that the Committee should have applied to the Society rather than to the Government direct, if they required pecuniary or other aid—as a Committee their duty was to devise measures and collect information, reporting thereon; and the Society of course, on their nomination, contemplated meeting any expences they might recommend as advisable in the prosecution of their inquiries. With regard to postage he was happy that the privilege had been accorded, but the indulgence seemed hardly consistent with its uniform denial to the Society itself.

Sir BENJAMIN MALKIN, as chairman of the Committee, admitted that it would have been more regular for the applications to Government to have been made through the general body. The inadvertence arose solely from the idea of the Society having no funds to spare, and this was also the reason for seeking to incorporate associates with the Committee who might by separate subscription meet all charges independently of any call on the general fund. He therefore moved,

That it be permitted to enrol parties who are not Members of the Society as associates of the Statistical Committee.

After some discussion, in which the President instanced the parallel case of the Physical Committee and its corresponding members. Mr. MACNAGHTEN moved an amendment, which was carried,

That the question be adjourned to next meeting, and in the mean time the opinion of the Committee of papers be requested.

Read a letter from Capt. SANDERS, Secretary of the Military Board, forwarding various plans and estimates by Capt. E. SMITH, Engineers, for the erection of the ancient column at Allahabad, that the Society might select the one considered by them the most appropriate.

Col. D. MCLEOD, Capt. FORBES, Capt. CUNNINGHAM, and W. P. GRANT, Esq. were nominated a Committee to make the selection, or to suggest modifications on Capt. SMITH's design.

Sir EDWARD RYAN, adverting to the approaching retirement of the Rev. Dr. MILL to Europe, suggested to the Society the propriety of paying some compliment to this distinguished scholar expressive of their feeling on the occasion. He would not now expatiate on the Vice President's title to such a tribute, because if his proposition were adopted, this pleasing task would be more ably performed and more appropriately conveyed in the name of the Society at large; he therefore moved first:

That an address be presented to Dr. MILL, expressive of the loss which the Society will sustain by the departure of a member so eminently qualified by his profound knowledge of the languages of the east to aid and assist in the objects and pursuits of the Society.

Mr. W. H. MACNAGHTEN had great pleasure in seconding any proposition to do honor to Dr. MILL. In no member had greater erudition ever been witnessed, nor had any converted profound learning to uses calculated more to benefit the country and to dignify the study of oriental learning. Addresses had been very rarely presented, but on such an occasion the practice would be more honored in the observance than in the breach.

The motion being carried *nem. con.* was followed by a proposition from the President,

That Mr. W. H. MACNAGHTEN, be requested to draw up the address, to be presented to Dr. MILL, at the next regular meeting, or at a special meeting should he be unable then to attend.

Sir B. MALKIN, seconded this motion. Though his Indian acquaintance with Dr. MILL and his capability of appreciating his local studies was less than that of other members, he had enjoyed his friendship at more remote date, and at a greater distance than many. The wide scope of his friend's knowledge embraced the east and the west. It had been observed of him at college, that his knowledge was equally remarkable for area and for depth: certainly its depth had not diminished by his sojourn in India, while its area had wonderfully extended.

This motion being likewise carried, Sir EDWARD RYAN prefaced his third proposition by reading the following eloquent passage from Dr. WILSON's reply to the address presented to him on his departure in December, 1832.

"If I can judge of your sentiments by my own, I can fully appreciate the motives which induce you to seek to preserve memorials of those who have taken an active part in the labours of the Society. One of the most interesting decorations of the room in which we are accustomed to assemble is to me, to all, the portrait of our illustrious founder; and I am sure you will agree with me that the apartment would possess a still dearer interest were such decorations multiplied; did the countenances of COLEBROOKE, WILFORD, WILKINS, and other distinguished members look down complacently upon the labours of their successors. I need not add, how irresistible are such influences upon the human mind, and how well calculated are such memorials to give wholesome stimulus to youthful energies. It is not from a merely selfish motive therefore that I accede to your request, but in the hope that even in this way I may contribute, however feebly, to the great ends of our Institution; at the same time I am not insensible of the kindness which has prompted the proposal, and if I do feel vain it is that you should have thought me worthy of the honor of being perpetually, as far as any thing human is perpetual, present among you."

He concluded by proposing,

That to meet the wishes of his numerous friends anxious to subscribe for the preservation of a memorial of Dr. MILL in the Society's rooms, he be requested on his arrival in England to sit for his picture to some eminent artist.

The Secretary in seconding this proposition, said he had been called on at a late festive meeting to bear testimony to Dr. MILL's great talents and learning, and had felt some humiliation at his total incompetency to answer such a call, for indeed it would have been naught but presumption in him to speak to merits so far beyond his criticism. Happily in these rooms no such testimony was required, for here all knew his learning and his value. He could not however omit to make public acknowledgment of the kindness and aid he had always received from Dr. MILL, in his capacity of Editor of the journal; to which Dr. MILL's contributions had been ever among the most valuable. A circumstance worthy of mention had enabled him to hear what the pandits thought of his attainments in Sanskrit, for Dr. MILL was so scrupulous of accuracy that he never put a page of his own composition to press until it had undergone the scrutiny of several natives of learning. On asking an opinion of one of the most learned of these, KAMALA'KA'NTA had begged to be allowed to express it in verse, and he now held in his hand what might really in some degree be regarded as a diploma of the Vice-President's Sanskrit proficiency. "Where, said the pandit, among all the English who have studied our language, was there yet one who could compose a poem in the style and language of our most classical ages? Verily he is KA'LI'DA'SA come again among us*."

Museum.

Read a letter from Dr. J. T. PEARSON, stating that in consequence of his departure from *Calcutta*, he was compelled to resign his situation as Curator of the Society's museum.

The catalogue which he had undertaken to prepare of the objects of Natural History in the museum, was in a forward state; that of the birds was ready, and the remainder he hoped to complete on his way up the river to join his new station.

The secretary said that the aid the museum had now received from government pledged the society to maintain it in an efficient state, and some arrangement was

* We have taken the liberty of publishing this poetical tribute with a translation at foot.—ED.

immediately necessary. The committee of papers would be the proper organ to take charge on the retirement of Dr. Pearson, and to recommend (if they judged proper) a successor. He had not himself made generally known the state of the question, but in the only quarter to which he had applied he had found that spirit in the reply which he himself always anticipated and rejoiced to see among his associates.—One member, Dr. McClelland, had volunteered to act gratuitously as superintending curator during his stay at the Presidency. Dr. Cantor too had in like manner, kindly undertaken to classify and arrange the large collection of snakes in the rooms below, now augmented by a valuable donation from Aga Kerbalai Muhammad.

He could not help mentioning some particulars regarding this donation. The Aga had purchased Dr. Pearson's private collection for 3,000 rupees, including a much more extensive selection of shells, insects, and other objects than the society possessed, mostly classified and named, and arranged in convenient cabinets. The society had spent more than double that sum in the two experimental years without (as it appeared to him) reaping equal advantage. Was it not then worthy of consideration whether in most cases it would not be preferable to purchase collections already formed, and only to keep up such an establishment as should suffice to preserve the objects with care, until the determination of the court were known in regard to the late memorial? If so he would propose that the government grant of 200 rupees monthly should be declined with proper acknowledgments, reserving the option of purchasing collections, which had been also liberally granted by government.

Should the majority however consider that the present favor should not be declined, he thought that the best way of employing it would be in deputing a collector, by permission, to accompany the expedition under Captain Pemberton now on the point of proceeding to *Bhotán*, and to which no naturalist stands appointed, although Dr. Griffith the botanist will doubtless give all the attention in his power, collaterally, to natural history.

The meeting seemed unanimous in opinion that the government grant should not be declined, and it was finally resolved, that the Committee of papers be requested to examine and report upon the best mode of maintaining the museum in an efficient state.

Literary and antiquities.

The Honorable George Turnour, presented a transcript and translation of the *Delhi* lát inscription (the four tablets) with an historical account of the tooth relic of *Buddha* to which he supposes it to relate.

The same gentleman forwarded, also

A continuation of his examination of the Páli Buddhistic annals.

The Baron Hammer von Purgstall forwarded from *Vienna*, a continuation of his translate of Sidi Ali Capudans' nautical work, the *Mohit*.

Captain R. Wroughton presented traced impressions of three inscriptions on two Burmese bells taken by the soldiery at *Arracan*, and now suspended in Hindu temples near *Hansi*. Also a beautiful drawing of the bells themselves.

Major P. L. Pew sent a specimen of the inscription on the broken lát, lying in the grounds of the late Colonel Fraser.

From the five or six letters sent it was evident that the inscription was identical with that of the Feroz lát—complete facsimiles are promised.

Mr. V. Wathorne, officiating judge of *Cuttack*, presented ink impressions of all the inscriptions at the caves in the vicinity of *Gaya*.

[Facsimiles of these are published in the preceding pages.]

Colonel Stacy forwarded on the part of H. S. Boulderson ; Esq. a facsimile of a long inscription discovered by him on a stone in the jangals, about 30 miles from *Bareilly*.

This has been read by Kamala'ka'nta pandit and pronounced to be in a very superior order of poetry ; it will be published immediately.

Lieutenant Kittoe reported the discovery of several further inscriptions at *Cuttack*, particularly of one occupying 270 square feet, which had been carefully covered over with plaister to save it from the spoliating hand of

collecting antiquarians. A portion had chipped off and the priests were now willing to expose the whole.

Dr. BLAND of H. M. S. Wolf presented a facsimile of the ancient inscription on the point of the jetty at *Singapur*.

[Printed in the present number.]

Geography.

G. VIGNE, Esq. forwarded a note on the valley of *Cashmír* dated at *Bandelpar* on the *Wuler* lake, 16th June 1837.

Mr. VIGNE identifies Iskardo with the fort of *Aornos* assaulted by ALEXANDER, he forwards copy of the only inscription discovered in the valley, (see p. 680.)

The Bishop of *Cochin-China* submitted a note on the geography of *Cochin-China*.

Physical.

The Secretary of the *Batavian* Literary Society begged, through Mr. A. MULLER, to open an intercourse with the Asiatic Society in its museum department, with a view to the exchange of duplicates.

"Some interesting reports have lately been published here on the geology of *Borneo*, and the western districts of *Java*, and the museum is well supplied with geological specimens from *Japan*, *Sumatra*, *Borneo*, &c. of which duplicates can be sent to *Calcutta*. The collection of birds and *Orang-otangs*, from *Borneo* is I suppose the finest in the east."

A letter from Sir J. F. W. HERSCHELL, dated *Cape*, 29th June, stated his want of success hitherto in procuring a hippopotamus skeleton for the society. These animals are become very rare.

Colonel MCLEOD, chief engineer forwarded several fragments of *coal* brought up by the borer in the fort from a depth of 392 feet. The depth attained now being 404 feet.

The coal has a specific gravity 1.20 and is of a fine quality, nearly resembling the *Assam* specimens; it is in rolled lumps evidently such as are found in the beds of torrents, and such as have invariably led to the discovery of seams in the vicinity. This will account for no actual beds having been penetrated by the auger: the discovery is very curious, as connected with the subject of Indian coal beds.

Lieut. G. FULLJAMES submitted the results of an experimental boring executed by him at *Gogo—(Cambay Gulph)* to the depth of 320 feet.

He also announced the discovery of fossil remains down the coast of a similar formation to those of *Perim*. And further, offered some remarks on the *Otis fulva*, or brown florican of south India.

Mr. D. Ross was requested by Capt. HILL, Mad. Army to present in the name of *Sooriah Narayana Pantalu*, a zemindar of *Gamsur*, a specimen of steatite or soapstone of his district, where it is used for pencils, &c. and sold at an anna the tola.

The secretary begged the society's acceptance of a large collection of preserved snakes and other objects given to himself by AGA KERBALAI MUHAMMAD. This collection formed part of the AGA's late purchase from Dr. PEARSON. It comprises

120 bottles of preserved snakes, &c. in spirits. One Turtle Skeleton. One backbone of a small Turtle. Six Alligator heads of various species. Two Rhinoceros skulls. Two horse skulls. Two large and one small Tiger skulls with ditto. One Hyæna cranium. Two horns of the *Gaur* Bos.

Dr. SPILSBURY sent some beautiful pencil drawings by Capt. REYNOLDS, of a fossil head (horse) found a few miles from *Jubulpore* on the left bank of the Nerbudda.

Capt. T. JENKINS forwarded from *Assam* four bottles full of divers insects, &c. including a queen-mother of the white ants.

Dr. T. CANTOR, submitted for inspection (with an explanatory notice) his drawings of the Molluscs and Zoophytes taken at the Sandheads by himself in a cruize of a few months.

A black pettrel was presented in the name of Dr. PEARSON: two Tetradon fish and a lobster, presented and set up by Mr. BOUCHEZ.

X.—*Tribute of the Pandits to the Rev.* W. H. Mill, *D. D., &c.*

By Kamalákánta Vidyálankár.

दाता सत्यपरायणः सुचतुरः शूरो दयालुर्मनांस्येजोवायुजलादिवेगगतिवित् लोकार्थं निर्व्याहकः श्रीकम्यानिगमः स्वधर्म्मनिपुणो न्यायात्प्रजापालको विश्वस्तः शरणागतैकशरणं जीयान्महीपालकः ॥ १ ॥

आर्य्यावर्त्तादिदेशान् निजविपुलबलैः खोलतान् ग्रसितुं स खेलंडाख्यप्रदेशादथ तद्भजनान् प्रेरयामास वीरान् वाणिज्ये धर्म्मकार्य्यं व्यवहृतिरणयोः संविभक्तान् विवेचामत्याच खोयकार्य्यं विदधति विदधुः केपि ते केपि रीत्या ॥ २ ॥

तेषां मध्येतु जोनस् कुलवुरुक सद्खँण्ड केरी उद्लसन् मेक्लाघटन् मिलकाख्याः प्रखरसुमतयः संस्कृतस्यातिशास्त्रे ग्रन्थान् कांश्चित् स्वमत्या क्रमलिपिकलनात् शीघ्र बोधोपयुक्तान् नानाभाषाप्रकाशाद्दुविधजनहृद्द्योतकान् संव्यकार्षुः ॥ ३ ॥

तेषां मध्ये सुवीरो व्यवहृतिकुशलो जोनसाख्यः सुधीरः प्राप्य ख्यातिं जजेति प्रथितबुधवराल्लापतोभूद् बुभुत्सुः शास्त्रं सोधीत्य बुद्धा ऊतभरतदपोत्पत्तिनाथस्य भाषां कोषग्रन्थस्य वर्णक्रमलिखितविधिं संस्कृताभ्यासचेतोः ॥ ४ ॥

सकुलवुरुकनामा ख्यातिभाग्दायभागे व्यवहृतिविषये च ग्रन्थभाषां चकार बहु विधबुधलोकान् कारयामास मुद्राचरयुतबहुपुस्तान्यल्पमूल्यानिचाच ॥ ५ ॥

केरी पुराणस्य चकार भाषां ईङ्खलंडदेशीयजनैकहृद्यां स्वधर्म्मशास्त्रस्य च संस्कृतेन भाषाप्रचारंच चकार रीत्या ॥ ६ ॥

नाट्यस्य काव्यस्य च कोषनीत्योः स्त्रीयां पुराणस्य चकार भाषां समानयामास च पुस्तकानि दृश्यात्मकाव्यानि उद्लसनेपि ॥ ७ ॥

मेक्लाघटनो व्याकरणे प्रवीरः स्मृतेर्बवस्यासकलं विलोक्य ईङ्खलंडभाषां विरचय्य नानादेशानुसारेण चकार पुस्तं ॥ ८ ॥

किन्वेषां कोपिनाभूदविरतकविनाश्लिष्टभाक् संस्कृतेज्ञो त्यक्त्वा मिश्रं समिश्रः सकल बुधवराद्भुधकाव्यैकरतो छन्दःशास्त्रप्रवीणः समविषमपदाद्यद्भुतिन्यासरीतिप्रज्ञाता कालिदासः पुनरवनि भुवीत्येवमुक्तेः प्रवादः ॥ ९ ॥

वेदांते सांख्यपातंजलसुमतमते वेदशास्त्रे स्मृतौ च ज्योतिः शास्त्रप्रवीणो द्रुततर कविताश्लिष्टभाक् सोपि मिश्रः ॥ वारविलपार्शकशास्त्रे विविध लिपिविधौ पंडितो धर्म्म शास्त्री शान्तो दांतो विनीतः सकल बुधवराल्लापसंतुष्टचेताः ॥ १० ॥

काव्ये श्रीकालिदासोद्धुरचितकुमारास्यपुस्ते सभाषां तच्छंदोरीतियुक्तामभिनव पदवीं चोकरोत् काव्यपूरः किन्वन्यस्य वक्षे समविषमपदन्यासबन्धक्रमेण प्राकाशीन् छंदसोतां बऽजन हृदयाह्लादिनीं पूर्व्वरीत्या ॥ ११ ॥

Translation.

1. The honorable Company, generous, pursuing a course of integrity, very dexterous, learned, compassionate, and exalted, skilled in the velocities and motion of fire, air and water (the laws of the elements), never relaxing from their determination,—deeply conversant in their own religion, with equity protecting their subjects and enjoying their trust, —moving forward to aid the aggrieved who come to them for help, may they long live the protectors of the world!

2. By their own mighty power to maintain the rule of ARYAVARTTA and all India have they deputed thousands of men, eminent either in commerce, in religion, in the administration of justice, or in war who arriving with full knowledge of their respective grades, have performed and do perform their several duties with regularity.

3. Among these, the names of JONES, COLEBROOKE, SUTHERLAND, CAREY, WILSON, MACNAGHTEN, and MILL. (have been conspicuous) for their acquirements in the Sanscrit language. Of how many highly instructive and entertaining books, by their individual talents in forming a complete analysis, have they reproduced the facsimiles in various other languages!

4. In the midst of these, preeminent stands the name of JONES the minister of justice, the cheerful, the very clever, justly endued with the title of Judge. Through the celebrity of his knowledge he has become the theme of conversation among the learned. Having perused the shástras, by skill he translated into his native tongue the famous drama of the birth of India's king. He first arranged in alphabetical order for the benefit of Sanskrit students the Cosha (or dictionary of Amera Singh).

5. The name of COLEBROOKE has acquired an inheritance of renown by his 'laws of inheritance.' He translated the text books of civil and criminal justice: he first brought together and employed many pandits in printing and disseminating Sanskrit books at a cheap price in this country.

6. CAREY introduced the puránas to the people of England in their native tongue; and translating the holy books of his own religion into Sanskrit, engaged systematically in their promulgation.

7. WILSON collected the literary stores of dramatic and other poetry, and made them known by translation, as well as the dictionary, the systems of philosophy, and the puránas.

8. MACNAGHTEN, celebrated in grammar, in legal opinions, having thoroughly examined the judicial authorities prevalent in different parts of the country, has arranged and published the results in English.

9. But who among all these has been capable of producing a continuous poem in the Sanskrit language, save MILL?—He indeed indites verse in which the best pandits can descry no faults. Of the works of prosody he is a master, so skilled in regular and irregular metre, in the correct and harmonious combinations of letters that rumour proclaims KA'LI'DA'SA is once more born to the world!

10. In the *Vedanta*, the *Sankhya*, the *Patanjala* and the *Buddhist* (schools of philosophy) deeply versed: in the holy vedas, in the law, and astronomical shástras equally learned, such smoothly flowing verses can MILL alone indite. In the literature of Bábel* and Persia with all their various characters, a scholar:—religious, mild, strict, affable, taking pleasure in conversation with all learned men,—such is his mind!

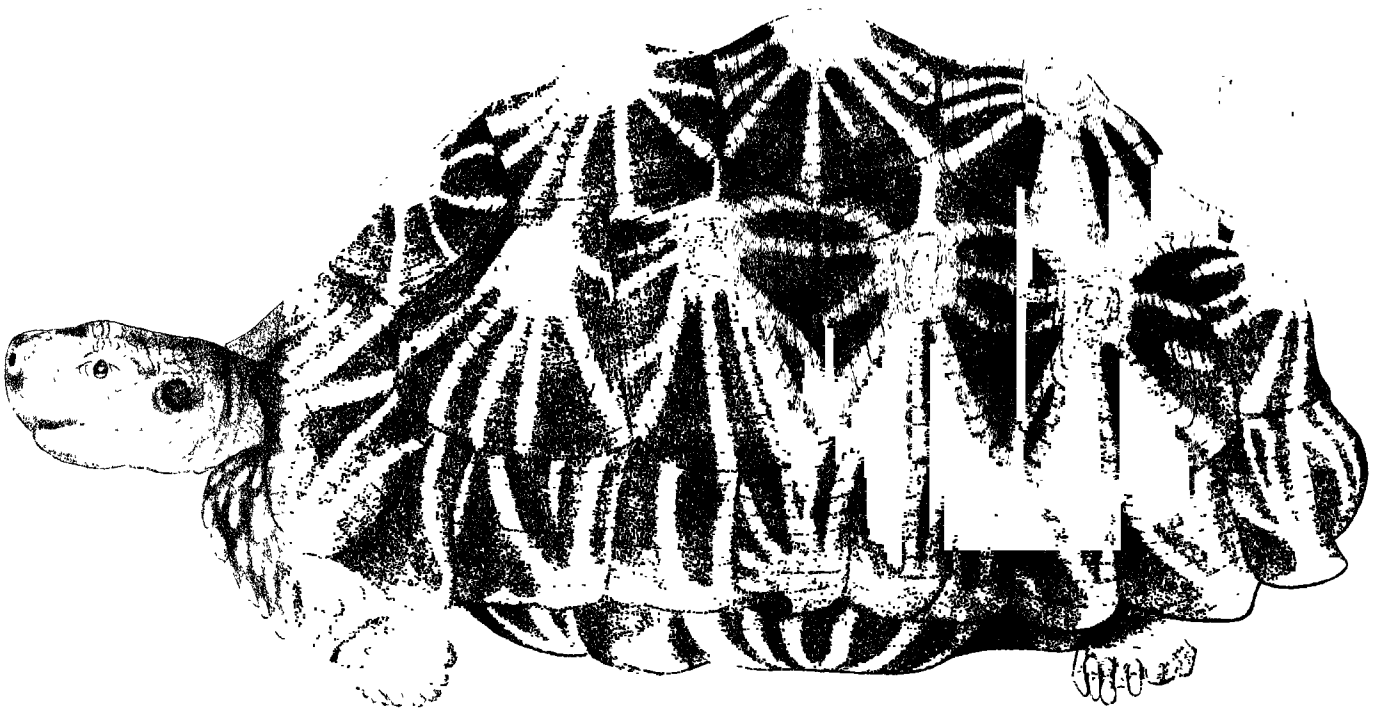
11. The work written by the celebrated KA'LIDA'SA, the *Kumára Sambhava*, has this equally eminent poet reproduced in the selfsame measure in his own language in a manner altogether new! What more need be said of him but that with due observance of regular and irregular metre, and of all the rules of the ancient authors he has composed the *Christa Gita* to delight and instruct the minds of multitudes!

* Bábel is, I fancy, a corruption of Bible, but it may be read and it is equally applicable in the sense I have given.—ED.

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of August, 1837.

Day of the Month.	Observations at 10 A. M.								Calculated Humidity.			Observations at 4 P. M.								Calculated Humidity.			Register Thermometer extremes.		Rain.		Wind.		Weather.	
	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.		Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Old Stand. Barometer at 32°.	New Stand. Barometer.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.		Centesimal of vapour wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Cold on roof.	Heat in sun's rays on roof.	On the ground.	At elevation 45 feet.	10 A. M.	4 P. M.	Morning.	Evening.
1	29,500	29,462	84,5	1,9	3,3	78,2	95		92	89	83	29,419	29,376	85,9	4,2	5,0	76,7	91		92	80	74	77,0		0,88	0,92	S. W.	sw.	cloudy.	showery.
2	,548	,507	83,6	4,0	4,6	75,0	91		82	80	77	,465	,435	84,8	3,1	4,7	76,7	92		86	82	78	76,5				sw.	sw.	do	cloudy.
3	,586	,557	83,3	2,5	3,3	76,7	95		89	89	83	,507	,469	82,5	1,5	2,0	79,7	96		92	91	93	77,2		0,77	0,82	sw.	E.	do	hard rain.
4	,563	,535	81,9	1,9	2,9	77,3	94		91	87	85	,515	,475	80,7	2,4	2,3		94		89	87		76,6		0,48	0,39	sw.		do	rain.
5	,655	,618	79,5	1,5	2,2	76,6	96		92	91	94	,570	,534	84,3	2,5	5,1	75,8	92		89	89	78	78,2				s.	S. W.	do	cloudy.
6	,668	,637	84,6		5,0	74,5	92			92	92	,596	,542	86,2	2,7	3,8	79,0	93		87	89	81	78,0				sw.	S.	cumuli.	do. hazy.
7	,646	,605	85,7	3,0	4,3	77,8	93		87	84	86	,552	,514	87,7	3,1	3,7	77,3	94		87	87	71	78,0				sw.	sw.	fine.	cloudy.
8	,666	,627	87,3	4,3	4,2	78,7	96		82	89	77	,576	,533	87,3	3,0	4,3	79,0	93		87	84	78	76,5		0,37	1,43	sw.	se.	hazy.	hazy.
9	,684	,646	88,1	3,9	3,7	78,7	94		83	87	82	,621	,586	89,1	4,4	2,9	77,2	94		80	87	65	73,0		0,37	0,45	s.		cloudy.	rain.
10	,677	,641	83,8	5,5	5,1	75,5	90		76	78	76	,570	,522	87,3	6,0	5,1	76,4	91		75	80	70	74,5		1,14	1,12	S. W.	S. W.	overcast.	cloudy.
11	,672	,638	86,5	5,7	5,4	77,6	91		76	80	75	,571	,519	90,7	8,9	6,0	76,7	86		86	70	64	76,8				s.	S.	cumuli.	cumuli.
12	,780	,661	87,1	6,7	5,8	75,6	87		72	72	69	,605	,556	90,7	8,4		78,8	88		67	70	69	71,2				S. E.	S.	cum. stra.	cum. stra.
13	,661	,632	87,4	7,8	7,5	76,7	87		69	72	72	,572	,527	91,7	10,5	8,0	74,5	83		61	65	58	78,3		0,13	0,14	S. E.	S.	fine.	fine.
14	,608	,568	88,1	7,5	6,3	76,5	88		70	74	69	,495	,440	90,4	9,8	9,1	76,1	83		62	65	64	78,8				S.	S. W.	cum. stra.	cum. stra.
15	,563	,526	88,1	7,5	7,1	75,5	87		70	72	67	,472	,423	90,9	8,3	5,2	78,2	88		67	74	67	80,0		1,20	1,25	S.	S.	do	rain.
16	,635	,590	87,6	7,0	6,1	77,0	89		72	76	72	,542	,493	86,9	6,7	5,8	76,9	89		72	76	73	76,0				sw.	S.	nimbi.	cloudy.
17	,611	,574	85,9	4,7	4,0	79,3	93		80	84	81	,525	,483	87,3	6,6	5,3	77,7	88		72	74	73	73,0				N. W.	S. E.	cum. stra.	do
18	,563	,518	86,0	4,3	3,7	78,5	94		81	87	78	,464	,419	84,3	3,7	3,7	78,4	93		83	84	83	77,7		0,30	0,33	N. E.	N. E.	hazy.	threatening.
19	,530	,487	82,9	3,2	2,1	79,0	97		85	93	88	,422	,386	82,7	3,1	2,3	78,6	96		85	91	88	76,5		1,28	1,40	N. E.	N. E.	rain scnd.	drizzle all day
20	,566	,519	84,1	2,6	2,4	78,5	96		86	91	87	,492	,391	84,3	3,9	2,6	78,5	96		82	91	82	75,8		0,44	0,43	E.	E.	cloudy. do	hazy.
21	,637	,595	81,8	2,0	1,9	79,0	97		90	93	93	,539	,484	84,3	2,4	2,5	79,2	96		90	91	85	76,0				N. E.	N. E.	do	cloudy.
22	,571	,541	83,0	2,1	1,7	79,8	97		90	93	88	,483	,427	82,7	2,3	2,3	79,9	96		90	91	93	77,2				N. E.	N. W.	do	rain.
23	,590	,488	83,8	3,7	3,0	78,3	95		84	89	84	,440	,497	82,8	3,3	3,3	78,2	92		85	82	87	78,1		0,36	0,37	E.		do	fine.
24	,490	,457	84,1	3,9	3,5	77,2	94		82	87	81	,379	,329	88,0	8,0	8,0	75,4	84		67	66	66	77,0		0,12	0,12	N. E.	N. E.	fair.	do
25	,431	,391	83,0	4,4	3,7	76,0	92		80	82	80	,358	,321	81,9	3,6	3,6	78,4	94		84	87	89	76,2		0,17	0,17	E.	N. E.	nimbi cldy.	cloudy.
26	,519	,484	84,0	2,7	3,3	79,2	94		87	87	86	,435	,411	84,2	0,5	0,5	79,5	96		96	91	87	76,2		0,64	0,67	E.	E.	do	do.
27	,510	,476	83,2	3,0	2,5	78,5	95		86	89	85	,400	,351	87,0	4,2	4,2	77,0	90		62	78	73	77,2		1,53	1,58	E.	E.	fine.	fine.
28	,472	,452	80,4	2,4	2,0	75,9	96		89	91	87	,477	,448	79,5	2,8	2,8	75,0	96		88	91	87	75,0		0,76	0,75	N. W.	S. W.	heavy rain.	rain.
29	,658	,618	83,5	3,3	2,9	77,2	96		85	91	83	,607	,555	84,2	2,9	2,9	78,2	95		87	89	83	74,8				sw.	S. W.	hazy.	hazy.
30	,714	,679	83,8	3,0	2,9	78,4	96		86	91	83	,608	,564	84,0	3,2	3,2	79,0	95		85	89	86	78,0				sw.	N. W.	cloudy.	fine.
31	,646	,608	84,6	4,3	3,9	78,5	92		81	82	82	,494	,445	89,7	6,7	6,7	75,8	87		74	72	88	76,4				N. W.	N. W.	cum. stra.	cum. stra.
Mean.	29,596	29,557	84,5	4,0	3,9	77,4	93		83	85	81	29,509	29,466	85,7	4,6	4,2	77,6	91		82	81	78	76,3		10,94	12,34				

Geometric Tortoise from Neemuch
Shell black with buff or pale yellow rays



"Testudo Geometrica" adult male.
3 natural size — weight 2 to 3 lbs

T. Hutton del

Coloured Lith. Press. Calcutta

JOURNAL

OF

THE ASIATIC SOCIETY.

No. 69.—*September*, 1837.

I.—*An examination of the* PÁLI BUDDHISTICAL ANNALS, *No.* 2. *By the Hon'ble* GEORGE TURNOUR, *Esq. Ceylon Civil Service.*

[Continued from page 527.]

IN the introductory remarks on the FIRST CONVOCATION, submitted in my preceding contribution, I have stated, collectively, all that I purpose to offer, explanatory of the general history of the THREE GREAT BUDDHISTICAL CONVOCATIONS, held in India, as deduced from the data found in *Buddhistical Páli Annals*. I should have forwarded, therefore, on the present occasion, the account of the SECOND and THIRD CONVOCATIONS, without further comment, had it not furnished two dates, recorded, both circumstantially and specifically, with peculiar distinctness, which dates are pointedly at variance, in their results, with the chronological evidence, afforded in European literature connected with that particular period of Asiatic history.

The first of these dates is that of the SECOND CONVOCATION, which, as already stated, was held at the completion of the first century after the death of SÁKYA, or before the birth of Christ 443; and the other, that of the THIRD CONVOCATION, which was held before Christ 308 in the 17th year of ASOKO's reign, falling respectively to the dates of the Buddhistical era, 100 and 235.

As it is between these two epochs that the invasion of India by ALEXANDER the Great, and the embassy of MEGASTHENES to the court of SANDRACOTTUS at *Palibothra*, took place, which are considered to constitute the earliest and the best authenticated links connecting the histories of the west and the east, it is reasonable to expect that European criticism will be, at once, and specially, directed to the examination of these particular portions of the Buddhistical annals, with

the view to testing their authenticity by the extent of their accordance with the chronology of the western authorities. I am induced, therefore, to recur here to some of the observations offered, on this question, in my introduction to the *Maháwanso*, the probable limited publicity of which work is not likely to diffuse those remarks throughout that more extended sphere in which the Journal of the Bengal Asiatic Society circulates.

The chronological data contained in the *Aṭṭhakathá* on the *Pitakattaya*, and in the *Maháwanso*, connected with the history both of India and of *Ceylon*, exhibit, respectively, in a tabular form, the following results.

Indian Table.

	Accession of each king. B. C.	Reign. B. years.	
Bimbisáro, ...	603	60 52	Sákya attained Buddhohood in the 16th year of this reign.
Ajátasatto, ...	551	8 32	Sákya died and the first convocation was held in the 8th year of this reign. The former event constitutes the Buddhistical epoch.
		A. B.	
Udáyibhaddako.....	519	24 16	
Anuraddhako, ... Muṇḍho, ...	503	40 8	Collectively.
Nágadásako,.....	495	48 24	
Susunágo,.....	471	72 18	
Kálásóko, ...	453	90 28	The second convocation held in the 10th of this reign.
Nandos,.....	425	118 22	Collectively.
Nandos, ...	403	140 22	Individually.
Chandagutto, ...	381	162 34	
Bindusáro, ...	347	196 28	
Asoko, ...	319	224 37	This monarch's *inauguration* took place in A. B. 218, four years after his *accession*, which shews an anachronism in this table of 10 years at his *accession*. The third convocation was held in the 17th year after his *inauguration*.

Ceylonese Table.

No.	Name.	Capital.	Accession. B. C.	Reign. Bud.	years.	Relationship of each succeeding sovereign.
1.	Wijayo, ...	Tambapanni,	543	1	38	The founder of the Wijayan dynasty.
2.	Upatisso, ...	Upatissa,...	505	38	1	Minister, regent.
3.	Paṇḍuwáso,.....	Ditto, ...	504	39	30	Paternal nephew of Wijayo.
4.	Abhayo,.....	Ditto,.....	474	69	20	Son of Paṇḍuwáso, dethroned.

	Interregnum,.....		454	89	17	
5.	Pandukábhayo,..	Anurádhapura,	437	106	70	Maternal grandson of Panduwáso.
6.	Mutasiwo, ...	Ditto, ...	367	176	60	Paternal grandson.
7.	Dewánanpiyatisso,	Ditto, ...	307	236	40	Second son.
	Mahanago.....	*Mágamo*.....				*Brother who founded the southern principality of Rohano.* — *Subordinate and contemporary rájas.*
	Yatálatisso, ...	*Kalyánia*, ...				*Son.*
	Goṭábhayo, ...	*Mágámo*, ...				*Son.*
	Kalyáni-tisso,..	*Kalyánia*, ...				*Not specified.*
	Kákawannatisso,	*Mágámo*,.....				*Son of Goṭábhayo.*
8.	Uttiyo, ...	Anurádhapura,	267	276	10	Fourth son of Mutasiwo.
9.	Mahásiwo,.....	Ditto, ...	257	286	10	Fifth ditto.
10.	Súratisso, ...	Ditto, ...	247	296	10	Sixth do., put to death.
11.	Séno and Guttiko,	Ditto, ...	237	306	22	Foreign usurpers, put to death.
12.	Asélo,.....	Ditto, ...	215	328	10	Ninth son of Mutasíwo, deposed.
13.	Eláro,.....	Ditto, ...	205	338	44	Foreign usurper, killed in battle.
14.	Duṭṭhagámani, ..	Ditto, ...	165	382	24	Son of *Kákawannatisso*.

Within the period comprehended in the above tables, there are four specific dates given in the Indian history, and two in the Ceylonese history, all computed from the epoch of the death of SÁKYA which occurred (as already stated) in the year B. C. 543, and which constitutes the Buddhistical era.

The four *Indian* dates are:

1st. SÁKYA attaining Buddhohood in the 16th year of the reign of BIMBISÁRO, B. C. 588.

2nd. * SÁKYA's death (in the 80th year of his age and the 45th of his Buddhohood) in the 8th of the reign of AJÁTASATTO, in which year also, the first convocation was held, B. C. 543.

3rd. † The second convocation held 100 years after the death of SÁKYA, in the 10th year of KÁLÁSO'KO's reign, B. C. 443.

4th. ‡ The inauguration of ASOKO in the 218th year of SÁKYA's death, at the close of the 4th year after this monarch's accession, B. C. 324.

The two *Ceylonese* dates are:

1st. § The landing of WIJAYO in *Ceylon* on the day that SÁKYA expired, B. C. 543.

2nd. ‖ The arrival of the Buddhistical mission under MAHINDO in

* Vide Chap. II. of the *Maháwanso*. † Vide Chap. III. of ditto.
‡ Vide Chap. V. of ditto. § Vide Chap. VII. of ditto.

‖ I am by no means confident that I may not be in error in computing this term from the *inauguration* of ASOKO in A. B. 218, instead of his *accession* four years earlier, in A. B. 214.

Ceylon in the 236th year after SÁKYA, being the first of the reign of DEWA'NANPIYATISSO, and the 18th of that of ASOKO, B. C. 307.

All these dates, specific as well as relative, excepting the computed one of the accession of ASOKO, (which alone admits of correction on the plea of a clerical error, to the extent of ten years, in the reign of CHANDAGUTTO) adapt themselves with so much precision to the several epochs they are designed to indicate, that I conceive it would amount to a positive infatuation for any advocate of the cause of Buddhistical literature, to venture to disturb their adjustment on any of the various pleas, of mistranslation, mistranscription, or misapprehension of the writer's meaning; on which it is but too often the practice to attempt to correct chronological data contained in Indian historical records of remote antiquity.

It appears to me to be impossible for any unbiassed examiner of these records, to follow up the links of this well connected chain of chronological evidence, and arrive at the specific date, assigned to the inauguration of ASOKO, of A. B. 218, occurring at the close of the 4th year after that monarch's accession, without acknowledging that that date is *designedly* a cardinal point in the history, in which it holds so conspicuous a place.

The date of the accession of ASOKO, four years antecedent to his inauguration, being thus distinctly fixed to be A. B. 214 or B. C. 329 on Buddhistical evidence, if that evidence is to be sustained, the invasion of ALEXANDER must, as the necessary consequence, be considered to have taken place in the early part of the reign of ASOKO, and not during the commotions which preceded the usurpation of the Indian empire, by his grandfather SANDRACOTTUS; and the embassy of MEGASTHENES and the treaty of SELEUCUS must also necessarily fall to a more subsequent period of the reign of ASOKO, instead of their occurring during the rule of SANDRACOTTUS.

Averse as I equally am, either to suggest or to adopt theoretical and hypothetical views connected with oriental research, I must, in candour, admit myself to be persuaded of the correctness of the conclusions which identifies SANDRACOTTUS with CHANDAGUTTO; and by my adherence to that persuasion, I am necessarily compelled to acknowledge that there is a discrepance of about 68 years between the western and the Buddhistical chronologies, at the particular point at which this identity takes place.

It is not, however, my intention, nor am I qualified, to analyze the two chains of data, and to balance the weight of the evidence each affords, for the purpose of deciding which of the two preponderates, and indeed once for all, I cannot be too explicit in avowing that the

service in which I have been employed has afforded me neither the leisure, nor the access to the means, that would admit of my prosecuting a comprehensive literary research. The sole object I have in view at present is to collect and arrange matter for the subsequent consideration of competent parties; and if in the progress of this humble task, I occasionally enter upon a critical examination of those materials, I wish those observations to be regarded rather as indexes to the repositories from whence collateral information has been drawn, or indications of the points which demand further inquiry, than as opinions in themselves entitled to weight, and advanced with the view to invite criticism.

In this spirit, and in the prosecution of this design, I proceed to offer the following remarks as explanatory of the grounds on which I am disposed to consider, that the error of the above discrepancy was *designedly* committed by the early compilers of these Buddhistical annals, partly in India, and partly in *Ceylon*, for the purpose of working out certain pretended prophecies hereafter noticed.

In the first place, these minutely adjusted dates are to be found only in BUDDHAGHOSO's *Páli* version of the *Aṭṭhakathá*, and in the *Maháwanso*; the latter history being avowedly compiled from the *Singhalese Aṭṭhakathá*, from which BUDDHAGHOSO translated his version also of the sacred commentaries into *Páli*; making a pilgrimage from India (where those *Aṭṭhakathá* were, it is said, no longer extant) to *Ceylon* for the express purpose of accomplishing that task. Both works, therefore are derived from the same source, viz. the *Aṭṭhakathá* brought from India by MAHINDO in B. C. 307, and promulgated by him in *Ceylon* in the native language.

In the second place, these dates are called forth, for the purpose of showing that certain pretended prophecies of SÁKYA and his disciples, all tending directly or indirectly to invest the Indian emperor ASOKO, the heirarch MOGGALIPUTTATISSO, and the island of *Ceylon* with special importance, as the predicted agents by whom, and the predicted theatre in which, Buddhism should attain great celebrity, were actually realized. In the third place, *no mention whatever is made of these prophecies in those parts of the text of the Piṭakattaya* in which the other revelations of SÁKYA himself, are recorded; and where indeed, until a recent discussion raised by me, the heads of the Buddhistical church in *Kandy* believed they were to be found.

The first of those prophecies refers to *Ceylon* and is given in the first sentence of the 7th and the last of the 6th chapter of the *Maháwanso*.

"The ruler of the world (SA'KYA) having conferred blessings on the whole world, and attained the exalted, unchangeable '*nibbán*;' seated on the throne,

on which '*nibbána*' is achieved, in the midst of a great assembly of Déwatas, the great divine sage addressed this celebrated injunction of *SAKKO, who stood near him: one WIJAYO, the son of SÍHABA'HU, king of the land of *Lála*, together with seven hundred officers of state, has landed on *Lankâ*. Lord of Déwos! My religion will be established in *Lankâ*, on that account thoroughly protect, together with his retinue, him and *Lankâ!*

"This prince named WIJAYO, who had then attained the wisdom of experience landed in the division *Tambapanni* of this land of *Lankâ*, on the day that the succession (of former Buddhos) reclined in the arbour of the two delightful sal trees, to attain '*nibbánan.*' "

This revelation or injunction, the object and effect of which are to fix the same day for the date of the death of SÁKYA and the landing of WIJAYO, is not only not to be found in the *Parinibbána-suttan*, where, if any where, it ought to be recorded, but is omitted even in BUDDHAGHOSO's *Páli Aṭṭhakathá* on that portion of the Buddhistical scriptures; nor have the priesthood been yet able to refer me to any other section of the Pálí sacred commentaries where it is to be met with. We shall probably find that this is one of the numerous passages of the historical portion of the ancient *Singhalese Aṭṭhakathá* which BUDDHAGHOSO excluded from his Páli version. I shall have to advert to these omissions of historical data, in a future notice of the genealogy of Indian kings.

The second prophecy is thus introduced in the 17th chapter of the *Mahâwanso*, propounded by the théro MAHINDO, in the account of the arrival and enshrinement in *Ceylon*, in the reign of the Ceylonese monarch DEWÁNANPIYATISSO, of certain corporal relics of SÁKYA obtained from India.

"While seated on the throne on which he attained '*parinibbánan*,' these five resolves were formed by the vanquisher endowed with five means of perception.

"Let the right branch of the great bo tree, when ASOKO is in the act of removing it, severing itself from the main tree, become planted in the vase (prepared for it).

"Let the said branch so planted, delighting by its fruit and foliage, glitter with its six variegated colors in every direction.

"Let that enchanting branch, together with its golden vase, rising up in the air, remain invisible for seven days in the womb of the snowy region of the skies.

"Let a two-fold miracle be performed at *Thúpáramaya* (at which) my right collar-bone is to be enshrined.

"In the *Hémawálako dágobat* (Ruwanwelli) the jewel which decorates *Lankâ*, there will be a '*dróna*' full of my relics. Let them, assuming my form as Buddho and rising up and remaining poised in the air, perform a two-fold miracle.

* Indra.

† These dágobas are now in ruins, at *Anurádhapura*. The account of their construction will be found in the *Mahâwanso*.

"The successor of former Buddhos (silently) willed these five resolves: on that account, in this instance, this relic performed this miracle of two opposite results.

"Descending from the skies (the collar-bone relic) placed itself on the crown of the monarch's head. The delighted sovereign deposited it in the shrine. At the enshrining of the relic in the dágoba (on the full moon day of the month of Kattika) a terrific earthquake was produced making the hair (of the spectators) to stand on end.

*** 'Thus the Buddhos are incomprehensible: their doctrines are incomprehensible: and (the magnitude of the fruits of faith, to those who have faith in these incomprehensibles, is also incomprehensible.')**

"Witnessing this miracle the people were converted to the faith of the vanquisher. The younger brother of the king, the royal prince MATTA'BHAYO, being also a convert to the faith of the lord of '*Munis*;' entreating of the lord of men (the king) for permission, together with a thousand persons, was ordained a minister of that religion."

This prediction *is* to be found in BUDDHAGHOSO's *Aṭṭhakatha* on the *Parinibbána-suttan*.

The third prophecy is given in the following words in the 5th chapter of the *Maháwanso*, as enunciated by the théros who held the SECOND CONVOCATION in B. C. 443, predictive of MOGGALIPUTTATISSO being destined to preside at the THIRD CONVOCATION, to be held for the suppression of a calamity which was to occur in 118 years from that date. This revelation also *is* recorded in BUDDHAGHOSO'S *Aṭṭhakatha*.

"The théros who held the SECOND CONVOCATION, meditating on the events of futurity, foresaw that a calamity would befal their religion during the reign of this sovereign (ASOKO). Searching the whole world for him who would subdue this calamity, they perceived that it was the long-lived TISSO, the bráhman (of the Bráhmalóka world). Repairing to him, they supplicated of the great sage to be born among men for the removal of this calamity. He, willing to be made the instrument for the glorification of religion, gave his consent unto them. These ministers of religion then thus addressed SIGGAWO and CHANDAWO, two adult priests. In eighteen, plus one, hundred years hence, a calamity will befal our religion, which we shall not ourselves witness. Ye (though) priests failed to attend on the occasion (of holding the SECOND CONVOCATION on religion); on that account, it is meet to award penalties unto you. Let this be your penance. The bráhman TISSO, a great sage, for the glorification of our religion, will be conceived in a certain womb in the house of the bráhman MOGGALI. At the proper age, one of you must initiate that noble youth into the priesthood. (The other) must fully instruct him in the doctrines of the supreme Buddho!"

On an attentive examination of the foregoing Ceylonese table, and of the historical details furnished in the *Maháwanso*, the following grounds suggest themselves to my mind for distrusting the correctness

* A quotation from the sacred commentaries.

of the date assigned for the landing of WIJAYO: and for considering it a fiction.

1st. The improbable coincidence of its occurrence on the precise day that SÁKYA died.

2nd. The aggregate period comprised in the 236 years from the landing of WIJAYO to the accession of DEWÁNANPIYATISSO is apportioned for the most part on a scale of decimation, among the six rájas who preceded DEWÁNANPIYATISSO.

3rd. One of these six rájas, PANDUKA'BHAYO, according to the *Maháwanso*, married at 20 years of age; he dethroned, when he was 37 years old, his uncle ABHAYO; and reigned thereafter 70 years. He must therefore have been 107 years old when he died, having been married 87 years: and yet the issue of that marriage MUTASIWO succeeded him, and reigned 60 years!

It is obvious, therefore, if the foregoing numerical succession of rájas be correct, that as regards the personal history of the two kings last named, their portion of the whole term of 236 years, which is represented to have intervened between the landing of WIJAYO and the accession of DEWA'NANPIYATISSO, is inadequately filled up by the historical incidents furnished by the *Maháwanso*; and that a curtailment of at least 60 years is required to adjust the narrative to any admissible duration of human existence.

Before, however, any conjecture can be afforded as to whether that curtailment should be effected by bringing forward the landing of WIJAYO, or throwing back the accession of DEWÁNANPIYATISSO, it will be requisite to examine the ensuing portion of the Ceylonese table; for the purpose of ascertaining whether that portion also of the Ceylonese history exhibits any chronological incongruity; and if it does, whether the incongruity demands dilation or contraction for the adjustment of its chronology.

It will there be found that four of DEWÁNANPIYATISSO's brothers, severally, succeeded to the monarchy, and each of them also reigned a term of precisely ten years. Between the accessions of the third and fourth brothers, SU'RATISSO and ASELO, two foreigners named SENO and GUTTIKO usurped the throne, and retained their power for 22 years. ASELO put these usurpers to death, and after his decennial rule, ELÁRO invading *Ceylon* from the *Chola* country deposed ASELO.

Now this ASELO is stated to be the ninth son of the above mentioned MUTASIWO, who enjoyed a long reign of 60 years, after succeeding his father PANDUKÁBHAYO, who at *his* demise, as noticed above, had been married to MUTASIWO's mother for 87 years. As MUTASIWO is not represented to be a minor, supposing him to have only attained

twenty, at his accession, his age, at the time of his death, according to the foregoing data, is left to vary from 80 to 147, as he may have been born in the first, or the sixty-seventh year after his parents' marriage. Whether MUTASIWO died at the age of 80 or 147, from the date of his demise to the accession of his ninth son ASELO, (even supposing him to be a reputed posthumous child of the venerable MUTASIWO) as a period of 90 years had elapsed, he must have been upwards of 90 years old when he commenced a turbulent reign by dethroning and putting to death two foreign usurpers; and closed it when he was past his 100th year, by being himself dethroned and put to death by ELÁRO, the first Cholian conqueror of *Ceylon*. That usurper reigned for 44 years when he was killed in battle by DUTTHAGÁMINI in B. C. 161, from which date, the authenticity of the chronology of the *Maháwanso* is not only free from all apparent discrepancy, but admits of corroboration by collateral evidence.

It will I think, from the foregoing remarks, be admitted, that the portion of Ceylonese history subsequent to the reign of DEWÁNANPIYATISSO, and down to DUTTHAGA'MINI, is also defective, and that either we must have more *dramatis personæ* to fill up the historical *tableau* exhibited in the *Maháwanso* between the years B. C. 543 and B. C. 161, or we must contract the duration of the term allotted to the incidents of that early section of the Ceylonese history.

Without going into further hypothetical comments, I venture to assert, after a careful examination of the various annals which I have had the opportunity of consulting, that any inquirer, not a Buddhist bound by his creed to believe in the prophecies before mentioned, will be disposed to decide that it is the chronology and not the general narrative of the history that requires correction.

The smallest amount of curtailment rendered necessary for the adaptation of the preposterous terms assigned to some of the early rulers of *Ceylon*, to an admissible duration of human existence, is about 60 years, between WIJAYO and DEWA'NANPIYATISSO; and a similar amount of retrenchment, between DEWA'NANPIYATISSO and DUTTHAGÁMINI, which would bring down the landing of WIJAYO from B. C. 543 to 423, being a period, (by the double retrenchment) of 120 years; and the accession of DEWÁNANPIYATISSO from B. C. 307 to 247, being a period, (by the second single retrenchment) of 60 years.

The effect which this adjustment has in tending to reconcile the Ceylonese with the European chronology will be noticed, after an examination of the contemporaneous portion of Indian history.

However justifiable it may be to disturb, on these grounds, the date assigned to the landing of WIJAYO, while there is no other

evidence for the support of that date than a pretended prophecy, and while the train of events adduced to sustain that date, incontestibly shows an anachronism, in excess, of 120 years,—I can see no tenable plea on which the correctness of the Buddhistical era founded on the death of SA'KYA in B. C. 542 can be questioned.

There is a chain of uninterrupted evidence in the historical annals of *Ceylon* from B. C. 161, to the present day, all tending to the confirmation of the authenticity of the date assigned to that era. The inartificial manner, also, in which that chain of evidence is evolved, is so different from the guarded adjustments that take place in the four preceding centuries, that it still further tends to conciliate confidence. It will be seen in the *Maháwanso* that the duration of the reigns of all the kings subsequent to DUTTHAGA'MINI are strictly within the bounds of probability; although these terms are seldom stated with such precision as to give the fractional part of the last year in each reign. The absence of this minutiæ of chronology must necessarily conduce, in a long line of successions, to an aggregate accumulation of a trifling anachronism. Accordingly when we suddenly come upon a date, recorded to mark the epoch of some great religious schism, or decyphered from some obscure inscription, and we apply that information to the correction of the current narrative, we find, as we ought to find, in the absence of artificial arrangement and falsification of data, accumulations of trivial anachronisms amounting to four, five, and six years, in the long intervals that have elapsed between each of those dates.

And again, when we find that these dates, *rari nantes in gurgite vasto*, adjust themselves *retrospectively* with the year of SA'KYA's death, and *prospectively* with the present year, A. B. 2380, or A. D. 1837, without deranging (excepting to the limited and necessary extent above noticed) any of that enormous mass of details involved in a history extending over a duration of twenty centuries; it is impossible without rejecting incontrovertible evidence, to question the correctness of the Buddhistical era.

With this conviction, or perhaps it will be called prejudice, strongly impressed on my mind, of the correctness of the date assigned to the Buddhistical era, I look to the details of the three ensuing centuries of the Buddhistical history of India, for the correction of the blots and discrepancies which European criticism will detect and expose in its comparison of the Buddhistical and European dates, assigned to the era of CHANDAGUTTO's reign; and the consequent inaccuracy of the dates of the SECOND and THIRD CONVOCATIONS.

I have not yet met in Buddhistical records with any prophecy, or

other restraint, dictated either by superstition or imposture, which should have compelled Buddhistical authors to work out their historical narrative so as to bring the 10th year of KÁLA'SOKO to the 100th year of SA'KYA. But some such restraint or motive must doubtless have operated to have led to the manifest distortion of facts, which represents that the SECOND CONVOCATION was held at the close of the 100th year after SÁKYA's death.

In the ensuing translation it will be seen that no less than eight of the leading members who officiated at the SECOND CONVOCATION "had beheld TATHÁGATO." Supposing them to have been only seven years old, even (the earliest age at which noviciates are admitted), in the year TATHA'GATO died, "these respositories of the whole word of Buddho" must have been 107 years old at the time they took their leading part in the SECOND CONVOCATION. On this point, however, the *Maháwanso* contains very specific information. In the 4th chapter in describing that convocation, it is there stated :

"SABBAKA'MI was at that time high priest of the world, and had already attained a standing of one hundred and twenty years in the ordination of '*Uposampada*' SABBAKA MI, SALHO, REWATO, KUJJASOBHITO, YASSO, the son of KA'KONDAKO and SAMBUSO, a native of *Sána :* these six théros were the disciples of the théro A'NANDO. WA'SABHAGA'MIKO and SUMANO, these two théros were the disciples of the théro ANURADHO ; these eight pious priests, in aforetime, had seen the deity who was the successor of former Buddhos.

"The priests who had assembled were twelve hundred thousand. Of all these priests, the théro REWATO was at that time the leader."

As the "*Uposampada*" ordination could not be obtained, even in the early ages of Buddhism, under the age of 20, it follows as a necessary consequence, if the authenticity of this history is to be admitted, that this hierarch was 140 years old when he presided over this convocation. No person surely will dispute the justice of my questioning the correctness of this chronology ; or take upon himself to deny that the correction of the anachronism here pointed out demands a curtailment of at least 60 years.

I am perfectly aware that in suggesting this inevitable retrenchment of 60 years, I *pro tanto* increase and indeed, precisely double the amount of the pre-existing anachronism as to the European date of the reign of SANDRACOTTUS. All, therefore, that I am entitled to deduce from this anachronism is that there is an undeniable and intentional perversion of historical data in the first century of the Buddhistical era. Whether this perversion can be corrected, either directly or inferentially, from other sources, is a question which those orientalists alone can answer, who have other collateral data on which they can rest their arguments.

From the date however of the SECOND CONVOCATION in the 10th year of KA'LA'SOKO's reign, a pretended prophecy already quoted, *does* occur to fetter Buddhist annalists, and compel them to make the 218th year of SA'KYA, fall to the 4th of the reign of ASOKO.

If without reference to any of these prophetic dates, or historical predictions, we follow the narrative history of the Buddhist patriarchs, and which is termed "the sacerdotal succession," we shall find ample justification for throwing equal discredit on the dates of both convocations. In that narrative will be found a consecutive and detailed account of no less than "six generations of preceptors" having intervened from the death of SA'KYA to the meeting of the THIRD CONVOCATION; comprising a period of 235 years, and affording an average of about 39 years for each preceptor. SABBAKÁMI, a member of the first generation, is represented to have presided over the SECOND CONVOCATION, and MOGGALIPUTTATISSO, a member of the sixth generation, over the THIRD CONVOCATION. Had we no other dates given to us, than those of the death of SA'KYA, and of the THIRD CONVOCATION, we should, dealing with averages, place the SECOND CONVOCATION over which SABBAKA'MI presided within 39 years after SA'KYA's death, and in that case the sentence "these eight pious priests in aforetime had seen the deity who was the successor of former Buddhos," instead of being a glaring absurdity would have amounted to an obvious probability. But the unfortunate imposture, emanating apparently in MOGGALIPUTTATISSO, which asserted that SABBAKA'MI had said in the SECOND CONVOCATION, "In eighteen, plus one, hundred years hence, a calamity will befall our religion which we shall not ourselves witness," in reference to the schism that MOGGALIPUTTATISSO suppressed in the reign of ASOKO, has led to these fatal, and at the same time clumsy distortions of historical and chronological data, by Buddhist authors. By placing the SECOND CONVOCATION over which SABBAKA'MI presided in the 100th year, they are obliged to assign to him the age of 140 years, and to make it appear also that the age of the first generation of preceptors had not then passed away. And at the time the THIRD CONVOCATION was held, only 135 years afte the SECOND, MOGGALIPUTTATISSO, who presided over it, is represented in the ensuing extract to be of the six generations of preceptors and "an aged person." The *Maháwanso* mentions with greater distinctness that "in the seventeenth year of the reign of this king (ASOKO) this all-perfect minister of religion (MOGGALIPUTTATISSO) aged *seventy-two* years, conducted with the utmost perfection this great convocation on religion." We are in short, on the one hand, told that at the end of the first century some of the preceptors of the first generation were alive,

and, on the other, that only 135 years thereafter, the head of the church was of the sixth generation, and at that time of the advanced age of seventy-two years.

It is not possible, therefore, to recognize the correctness of any of these dates, which are based on pretended prophecies, and in rejecting them as fictious we are reduced to the necessity of adjusting the events comprised in these three centuries by two points only, on which alone any reliance can be placed, viz: the Buddhist era of SA'KYA's death, B. C. 543, and the European age of SANDRACOTTUS, (about) B. C. 325. If (as is stated) SANDRACOTTUS reigned *34 years, his son BINDUSA'RO 28 years, and the THIRD CONVOCATION was held in the 17th year of ASOKO's inauguration and 21st of his reign, we shall have to place the THIRD CONVOCATION in B. C. 242 instead of B. C. 307, which (as the 18th of ASOKO falls to the 1st of the Ceylonese monarch DEWA NANPIYATISSO) would accord with the preceding adjustment of the Ceylonese chronology within the trifling amount of six years.

Although the general result of this adjustment only produces an alteration in the Buddhistical chronology of this period amounting to 65 years, still it is one calculated to occasion an extensive derangement in the foregoing table, from the very circumstance of its assumed claim to minute accuracy.

I do not despair, however, of seeing these discrepancies accounted for in due course of time. We know that the Bráhminical authorities arrange the Mághada line of succession differently from the Buddhistical. There is evidently some confusion in the durations assigned to the reigns of the ten NANDOS. But whenever, or by whatever means, the adjustments are made, they must be made, to the limited extent of the above anachronism, in direct defiance of the Buddhistical authorities extant in *Ceylon*; and by hitting blots, and detecting inaccuracies which have inadvertently escaped the notice of the pious impostors who have spared no pains in endeavouring to interweave the prophetic and falsified chronology of India and of *Ceylon* into each other.

As an illustration of their ingenuity, I give the following extract from another part of BUDDHAGHOSO's *Aṭṭhakathá*.

"In the †eighteenth year of the reign of AJA'TASATTO, the supreme BUDDHO attained *Parinibbánan*. In that very year, prince WIJAYO, the son of prince SI'HO, and the first monarch of *Tambapanni*, repairing to this Island, rendered

* I am disposed to adopt the reading of the last extract of the *Aṭṭhakathá* which makes this term "twenty-four years."

† This appears to be a clerical error for eight.

it habitable for human beings. In the fourteenth year of the reign of UDA'YABHADO, in *Jambudipo*, WIJAYO died here. In the fifteenth year of the reign of UDA'YABHADO, PANDUWA'SADEWO came to the throne in this island. In the twentieth year of the reign of NA'GADA'SO there, PANDUWA'SADEWO died here. In the same year, ABHAYO succeeded to the kingdom. In the seventeenth year of the reign of SUSUNA'GO there, twenty years of the reign of ABHAYO had been completed; and then, in the said twentieth year of ABHAYO, the traitor PANDUKA'BHAYO usurped the kingdom. In the sixteenth year of the reign of KA'LA'SOKO there, the seventeenth year of PANDUKA'BHAYO's reign had elapsed here. The foregoing (years) together with this one year, will make the eighteenth (of his reign). In the fourteenth year of the reign of CHANDAGUTTO, PANDUKA'BHAYO died here; and MUTASIWO succeeded to the kingdom. In the seventeenth year of the reign of DHAMMASOKO rája, MUTASIWO rája died, and DEWA'NANPIYATISSO rája succeeded to the kingdom.

"From the *Parinibbánan* of the Supreme *Buddho*, AJA'TASATTO reigned twenty-four years. UDA'YABHADO, sixteen; ANURUDDHO and MUNDHO, eighteen. NA'GADA'SAKO, twenty-four SUSUNA'GO, eighteen years. His son KA'LA'SOKO, twenty-eight years. The ten sons of KA'LA'SOKO reigned twenty-two years. Subsequently to them, NAWANANDO reigned twenty-two years. *CHANDAGUTTO, twenty-four years. BINDUSA'RO, twenty-eight years. At his demise ASOKO succeeded, and in the eighteenth year after his inauguration, MAHINDO théro arrived in this island. This royal narration is to be thus understood."

The fictitious synchronisms attempted to be established in this extract, between the chronology of India and of *Ceylon*, are, it will be observed, most successfully made out. The discrepancies as to the year of AJA'TASATTO's reign, in which SA'KYA died; as to the comparison between KA'LA'SOKO and PANDUKA'BHAYO, and as to the duration of the joint rule of ANURUDDHO and MUNDHO, as well as that of CHANDAGUTTO, all manifestly proceed from clerical errors of the transcribers; as will be seen by the following juxta-positions.

	A.	B.		A.	B.
18th of Ajátasatto, ...		1	Buddho died and Wijayo landed in *Ceylon*, ...		1
14th of Udáyabhaddako,.....		38	Last of Wijayo, ...		38
15th of Ditto, ...		39	First of Pandewáso,.....		39
20th of Nágadáso, ...		68	Last of ditto, ...		69
17th of Susunágo, ...		89	20th of Abhayo, ...		89
16th of Kálásoko,.....		106	17th of Pandakábhayo, ...		124
14th of Chandagutto, ...		176	Last of Ditto, ...		176
17th of Dhammasoko, ...		235	Last of Mutasiwo, ...		236

With these preparatory remarks, the design of which has been already explained, I shall proceed to translate the following passages descriptive of the second and third convocations, taken from the introduction in BUDDHA'GHOSO's *Atthakathá* on the *Winayo* and *Abhidhammapiṭako*.

* In a preceding note, I have stated that I consider this date, though an apparent erratum, to be correct.

SECOND CONVOCATION.

It is stated in the account of the FIRST CONVOCATION on the *Winayor* that, in the first place, this question was asked by the venerable MAHA'KASSAPO. "Belo'LI, UPA'LI where was the *Párájikañ* first propounded?" and that after other prescribed interrogatories, he questioned him as to its import, its origin, and as to who the party concerned was.

In the course of that discussion, most fully illustrating (the *Párájikañ*) even from the cause that gave rise thereto, it was set forth by the beloved UPA'LI, who was desirous of explaining every circumstance connected therewith, specifying even by whom it was originated, and by what circumstances it was occasioned, beginning with, "At that period the sanctified BUDDHO was dwelling in *Weranjá*" and the rest that appertained (to the *Párájikañ*).

It must be distinctly understood that this was thus spoken by the beloved UPA'LI at the FIRST CONVOCATION, (it did not originate at the SECOND CONVOCATION). From this quotation alone, it is satisfactorily shewn, by whom and when this was said. If it be asked in this place—Why is this adverted to here?—the answer is, with whatever object that "*Nidánan*" may have been investigated by the venerable MAHA'KASSAPO (at the FIRST CONVOCATION) with the same object in — of thoroughly illustrating that "*Nidánan*"—it is begun now also from the commencement with the words, "It is so said by him (BUDDHO)." Be it understood, however, that when these words were spoken by the beloved UPA'LI even at the FIRST CONVOCATION, it was admitted to be a quotation (BUDDHO not being then alive).

By the foregoing it being sufficiently explained by whom, when, and on what account, (the *Winayo* was first propounded in convocation) the details whereof will be found in the respective *Matiká*, it now remains for me to afford these further explanations.

1st. By whom it was received* (from *Buddho*).

2ndly. By whom it has been handed down.

3rdly. Where it was authenticated.

For the purpose of explaining these points the passage, "At that period the sanctified BUDDHO was dwelling in *Wéranjá*—" and other similar passages, of which the *Nidánan* of the *Winayo* is composed, having been quoted, it was duly set forth—by whom it was received, by whom it was handed down and where it was authenticated, beginning from the very commencement, thus: "From the mouth of BHAGAWA' himself, it was received by the venerable UPA'LI; and from his mouth, both before the *Parinibbánan* of TATHA'GATO by many thousands of Bhikkhus who had obtained the six *Abhinná*, and after the *Parinibbánan* of THATA'GATO, by the théros who had held the (FIRST) CONVOCATION on *Dhammo*, having MAHA'KASSAPO for their chief."

By whom was it handed down?

In *Jambudípo*, commencing first from the théro UPA'LI it was perpetuated, whatever that interval might be, to the period of the THIRD CONVOCATION, through a generation of *A'chériya*. Hence the appellation of the "Achériyán generation" or generation of preceptors. These were the five victors over sin;

* Literally "upheld" as a burden is sustained which is passed from one person to another, without being set down.

UPA'LI, DA'SAKO, SÓNAKO, SIGGAWO, and TISSAMOGGALIPUTTO who perpetuated the *Winayo*, uninterruptedly from generation to generation, to the THIRD CONVOCATION, in the land celebrated by the name of *Jambudípo*.

The venerable UPA'LI having learned, from the mouth of BHAGAWA himself, this *Winayo*, in its appropriate text (the Pálí version) implanted it in the hearts of many. In the fraternity of that venerable personage, from amongst those who having learned the *Winayo*, and acquired a knowledge thereof, those who attained the condition of *Puthujjaná*, *Sótápanna*, *Sakatágámi* and *Anágámi* transcended the limits of enumeration. Of those alone who were sanctified (by arahathood) there were one thousand.

DA'SAKO was a disciple of his fraternity. He having learned the same from the mouth of the said UPA'LI, similarly propounded the *Winayo*. In the fraternity of that venerable person, the *Puthujjaná* and others who, having learned the *Winayo*, had acquired a knowledge thereof, were beyond the limits of computation. The sanctified alone amounted to one thousand.

SÓNAKO was a disciple in the fraternity of DA'SAKO théro. He learned the *Winayo* from the mouth of his preceptor DA'SAKO, in like manner, propagated it. In the fraternity of this venerable personage also, the *Puthujjaná* and others, who, having learned the *Winayo*, acquired a knowledge thereof, were beyond the limits of computation. The sanctified alone amounted to one thousand.

SIGGAWO was a disciple in the fraternity of DA'SAKO théro, and having learned the *Winayo* in the fraternity of that théro, became the chief of a thousand *Arahantá*. In the fraternity of that venerable personage, having learned the *Winayo* he acquired a knowledge thereof, as to the *Puthujjaná*, *Sótápanná*, *Sakatágámi*, *Anágámi* and *Arahantá*, there was no computing their number, either in hundreds or in thousands. At that period in *Jambudípo* the number of Bhikkhus was very great. The supernatural gifts of the théro MOGGALIPUTATISSO, will be celebrated in the THIRD CONVOCATION.

Thus this *Winayo-piṭakan*, be it known, has been handed down through these generations of preceptors, from its commencement to the THIRD CONVOCATION. In order to the due understanding of the THIRD CONVOCATION, this connecting narrative should be borne in mind.

The five hundred sanctified and supernaturally gifted théros, who had MAHA'-KASSAPO for their chief, having held the (FIRST) CONVOCATION on *Dhammo*, and caused it to be universally glorified, and having lived the full measure of human existence, released from all human frailties, were extinguished like lamps exhausted of oil.

Thereafter when, in the prescribed rotation of night and day, a hundred years had elapsed from the *Parinibbánan* of BHAGAWA', certain Bhikkhus resident in *Wésáli*, natives of *Wajjí* (decided) as follows:

" * The preservation of salt in horn is allowable."

" † The allowance of two inches is admissible."

* Priests can only keep salt for seven days. The innovation consisted in deciding that if kept in horns, it might be retained for any period.

† Priests should not take substantial food after midday. Here it is allowed till the shadow of the declining sun is two inches long.

" * Indulgence in the country is allowable." " † Ceremonies in (sacerdotal) residences are allowable." " ‡Obtaining subsequent consent is allowable." " §Conformity to the example (of preceptors) is allowable." " ‖ Acceptance of whey (as distinct from milk) is allowable." " ¶ The acceptance of (fermented toddy resembling) water is allowable." " ** The use of seats covered with cloths (without fringes) is allowable." " †† The acceptance of gold and silver is allowable." These were the ten indulgences which they put forth.

To these persons, the rája KA'LA'SOKO, the son of SUSUNA'GO, extended his protection.

At that period, the venerable YASSO, the son of KA'KANDAKO, in the course of his pilgrimage among the inhabitants of *Wajji*, having heard that certain bhikkhus of *Wésáli*, natives of ‡‡ *Wajji*, were propagating these ten indulgences, thus meditated.. " Having myself heard of the calamity which is impending over the religion of the deity gifted with ten powers, should I be deficient in my exertions (to avert it) that proceeding would be unbecoming of me: wherefore disgracing these impious (characters), let me glorify *Dhammo*."

Wherever *Wésáli* might be, thither he proceeded. There the venerable YASSO, the son of KA'KANDAKO, sojourned in the *Kutágára* hall in the *Mahá-wanno* wihára at *Wésáli*. On that occasion, the bhikkhus of *Wésáli*, natives of *Wajji*, on the *Upósathá* day in question, filling a golden basin with water, and placing it in the midst of the assembled priests, thus appealed to the devotees of *Wésáli* who attended there. " Beloved! bestow on the priesthood either a *Kahapanañ*, or half, or a quarter of one, or even the value of a *másu*; to the priesthood, it will afford the means of providing themselves with sacerdotal requisites." All that occurred (subsequently) up to the meeting of the SECOND CONVOCATION (will be found in the *Sattasatikakandako*).

There were selected (for the CONVOCATION) seven hundred bhikkhus, neither more nor less. From this circumstance this convocation on the *Winayo* is called also the " *Sattasatika*" (the convocation of the seven hundred).

At this meeting twelve thousand bhikkhus assembled, brought together by the exertions of the venerable YASSO. In the midst of these, by the interrogation of the venerable RE'WATO, and by the exposition of the *Winayo*, by the théro SABBAKA'MI, the ten indulgences being thoroughly inquired into, judgment (of suppression) was finally pronounced.

* That they might partake in the country, what is denied to them at their wihára; whereas both are forbidden.

† That they might perform certain ceremonies in their residences, which could only be observed in the *Upósathá* hall.

‡ Consent ought always to precede any act connected with religion.

§ No example is admitted as an excuse, if the act itself be forbidden.

‖ Whereas whey as a component part of milk is considered to be substantial food, and as such cannot be partaken of after 12 o'clock.

¶ No fermented beverage is admissable.

** No costly cover, whether with or without fringes can be used.

†† All precious metals are prohibited.

‡‡ Present *Allahabad*.

Thereupon the théros deciding "Let us again hold a convocation on *Dhammo* and *Winayo*;" and having selected seven hundred bhikkhus, the maintainers of the three *Pitakáni*, and gifted with the qualification of sanctification; and assembling at the *Wâlukárámo* wihâro at *Wésali*, and, in the manner that MAHA'KASSAPO had held the (FIRST) CONVOCATION, having purified the whole *Sásanam* of defilements, revised in convocation the whole of *Dhammo* and *Winayo*, according to the several divisions of the *Pitakáni*, called, the *Nikáyo Argo* and *Dhammakkhando*.

This convocation was brought to a close in eight months; and from its having been held by seven hundred bhikkhus, THIS CONVOCATION has been universally called the *Sattasatika*; and, taking into account the one held previously, it is also called DUTIYA'SANGITI (the SECOND CONVOCATION).

(It is thus recorded in the *Sattasatikakando*). "From amongst those théros by whom THIS CONVOCATION was held, the most renowned were, SABBAKA'MI, SALHO, RE'WATO, KHUJJASÓBHITO, YASSO and SAMBH'UTO of *Sána*; they were the diciples of ANANDO; and in aforetime had beheld TA'THAGATO. Be it known, however, that, there were also SUMANO and WA'SABHAGA'MI. These two were the disciples of ANURADHO, and they also in aforetime had seen the TATHA'GATO."

Whosoever the théros might be by whom the second convocation may have been held, the whole of them were individuals of great weight, celebrated by their deeds, and sanctified (by *arahathood*).

This is the SECOND CONVOCATION.

The events intervening between the SECOND and THIRD CONVOCATIONS are stated in this *Aṭṭhakathá* in great detail, particularly in reference to the personal history of MOGGALIPUTTATISSO, by whom the LAST CONVOCATION was held. A succinct, but perspicuous, historical account of which period will be found in the 5th chapter of the *Mahâwanso*. It will be sufficient for my present purpose to give the names only of the théros, who were the sacerdotal successors to *Upáli*, to whom the *Winayo* division of the *Piṭakataya* was entrusted at the FIRST CONVOCATION. It has been mentioned in a foregoing paragraph that his pupil and immediate successor was DA'SAKO; and that SÔNAKO was DA'SAKO's disciple. His two disciples CHANDAWAJJ and SIGGAWO, were adult priests at the termination of the SECOND CONVOCATION, which, as already stated, was held at *Wésáli*, at the close of the first century after the death of BUDDHO, being the year before Christ 443.

On them was imposed the task of converting the youth TISSO, the son of the Bráhman MOGGALI, who, it was predicted by the priests who held the SECOND CONVOCATION, was destined to subdue a calamity that they foretold would befall the religion of BUDDHO, in one hundred eighteen years from that date.

I resume the translation of the *Aṭṭhakathá* with these remarks, serving to show the continuity of the sacerdotal succession to a point

at which the circumstances that gave rise to the THIRD CONVOCATION occurred. It is here of importance to notice that the existence of *a version* of the *Aṭṭhakathá* on the *Piṭakattaya at that period* is specifically mentioned.

The following is the passage I allude to :—

"From the following day, TISSO entered upon the study of the word of BUDDHO. Then becoming a *sámanéro*, and postponing the study of the *Wenayapitakan* (as the most difficult) he acquired the knowledge of all (the rest) of the word of BUDDHO, *together with the Aṭṭhakathá*. From the time of his being ordained *Upasampadá*, continuing to be protected (by SIGGAWO and CHANDAWAGGI) he became master of the (whole) *Pitakattáya*. The said two persons, the one the preceptor, and the other the ordainer of MOGGALIPUTTATISSO having deposited the whole of the word of BUDDHO in his hands, and lived the ordinary measure of human existence, demised.

"Subsequently thereto, MOGGALIPUTTATISSO, devoting himself to the prescribed course of sanctified meditation, and attaining arahathood, extensively propagated the *Winayo*.

"At this period, the rája BINDUSA'RO had an hundred sons. All these ASOKO destroyed, reserving only prince TISSO, who was born of the same mother with himself. This murderer having reigned a period of four years without celebrating his inauguration, at the close of the fourth year, which was the 218th after the *parinibbánañ* of TATHAGATO, entered upon the supreme sovereignty of all *Jambudípo*, as one united empire. By the preternatural manifestations which attended his inauguration these miracles were wrought."

These miracles and manifestations will be found in the *Maháwanso*. They would occupy too much space in this article, and are not essential to the continuity of the history of the Buddhistical scriptures.

The *Aṭṭhakathá* proceeds thus :

"This rája for a period of three years from his inauguration, lived out of the pale of Buddhism, an heretic; and in the fourth year became a convert to the word of BUDDHO. His father BINDUSA'RO was of the bráhman faith. He distributed (daily) rice-alms among eight thousand heretics, consisting of brahmans, and to bráhmanical heretics of the *Paṇḍaráṅga* and other sects. While ASOKO was continuing to bestow these alms within his palace, in the same manner that it had been conferred by his father, on a certain occasion, while standing at a window, having noticed these persons taking their repast with unbecoming avidity, without regard to decorum, restraint over their appetites and devoid of all decency in manners, thus meditated ; 'Surely it is requisite that alms, such as these, should be conferred with discrimination ; and in an appropriate manner also.'

"Having come to this resolution, he thus addressed his courtiers 'Go, my friends, and each of you fail not to conduct into my palace those fraternities of bráhmans whom you esteem to be pious characters, that I may bestow alms on them.' These officers replying : 'Lord ! most willingly,' and conducting to his presence the several *Páṇḍaráṅga*, *Jiwaká*, *Nigaṭhá* and other devotees, said, 'These, mahárája, are our *arahantá*.'

"Thereupon the rája causing superb seats to be prepared within the palace, said to them, 'Proceed;' and as they entered, 'take (added he) each of you the seat appropriate to yourself;' they, without discrimination, (as to seniority, or superiority in sanctity) seated themselves, some on rich seats and others on wooden forms. The rája noticing this procedure, and being convinced that there was no spiritual merit among them, the appropriate repast having been served to them, allowed them to depart.

"While he was in the observance of this practice, on a certain day, standing at the window, he noticed passing the palace yard, the *Sámanéro* NIGRÓDHO who had overcome, and who kept in subjection and thoroughly controled, the dominion of the passions: and who was gifted with the most perfect decorum in demeanour. Inquiring 'who is this NIGRÓDHO?' he was told, he was the son of prince SUMANO, the eldest of the sons of the rája BINDUSA'RO."

The narrative of the *Aṭṭhakathá* then enters into the personal history of NIGRÓDHO, the flight of his mother pregnant of him from *Páṭilipura*, on the occasion of his father, and the other sons of BINDUSA'RO, being massacred—his birth, education and admission into Buddhistical ordination, and ultimately NIGRÓDHO's conversion of his uncle ASOKO, who was then supreme ruler of India, to the Buddhistical faith.

The *Aṭṭhakathá* also contains the account of the conversion, and subsequent ordination into priesthood, of TISSO, the younger brother of ASOKO, who had already been elevated to the dignity of "*Oparája*" (which would appear to be the recognition of the heir presumptive) as well as of the ordination of prince AGGIBRAHMA', the husband of ASOKO's daughter SANGHAMITTA'; and finally, that of his son MAHINDO, celebrated for his conversion of *Ceylon*, and of the aforesaid daughter SANGHAMITTA'. For all these details, also, I am compelled, from want of space, to refer to the fifth chapter of the *Maháwanso*, resuming again my translation of the *Aṭṭhakathá* from the point at which the incidents which led to the THIRD CONVOCATION being held, are set forth.

While these advantages and honors were conferred on (the Buddhistical) religion, the heretics (*titthayá*) deprived of those advantages and honors, and finally, unable to obtain even food and raiment, out of covetousness of those benefits and distinctions, having assumed Buddhistical ordination, set forth each their own peculiar creeds, saying "This is *Dhammo*." "That is *Winayo*." Although they were unable to obtain regular ordination, shaving their own heads and clothing themselves in yellow robes, they sauntered about the wiháros, and intruded themselves during the performance of the **Upósatho* and †*Pawárana* rites, as well as at the ‡*Sanghakamma* and §*Ganakamma* meetings of the priesthood. With these persons, the bhikkhus would not perform the *Upósatho* rites.

* Periodical rites, and ceremonies regulated by the changes of the moon.

† Final and conclusive rites and ceremonies.

‡ A meeting of priests exceeding five in number for religious purposes.

§ A meeting of priests below five in number.

At that crisis, MOGGALIPUTTATISSO théro thus meditated. "Now is this judgment manifested: at no remote period it will grow into a serious calamity, which no person will be able to suppress, who continues to dwell among these persons." Transferring therefore the charge of his fraternity to the théro MAHINDO that he himself might lead a life of seclusive devotion, departed for the **Ahoganga* mountain (mountain beyond the Ganges).

These heretics, although subjected to every degradation, by the bhikkhus, as well as by the *Dhammo*, the *Winayo* and the ordinances of the divine teacher (Buddho); and they had utterly failed in attaining the condition prescribed by the *Dhammo* and *Winayo*, nevertheless gave rise to various (calamities, which were like unto) excrescences, defilements, and thorns, unto the religion (of *Buddho*); some of these flocked to the fire (as an object of adoration): others scorched themselves in the manner of the † *Panchatápa* sect: some prostrated themselves towards the sun: others began to declare (openly) "let us destroy your *Dhammo* and *Winayo*." Thereupon the congregation of bhikkhus would not perform either the *Upósatha*, or *Pawárana* rites with them; and suspended for a period of seven years, the performance of the *Upósatha*; continuing however to dwell at the *Asókárámo* wiháro (at *Pátilipura*). This circumstance was reported to the rája, the monarch directed this command to be signified to one of his officers. "Repairing to the ‡wiháro and suppressing this matter, cause the performance of *Upósatha*, to be re-established." This officer not being able to obtain any further explanation from his sovereign, referring himself to the other officers of state, said, "the rája is dispatching me with this command, 'repairing to the wiháro and suppressing this affair, cause the *Uposatha* to be re-established:' in what manner am I to suppress this matter?" They replied: "We think thus: on any occasion that a (rebellious) province is to be reduced to subjection, the traitors (who raised the rebellion) are put to death. In the same manner, should there be those who refuse to perform the *Upósatha*, the rája must wish that they should be put to death."

Thereupon this minister repairing to the wiháro, and assembling the bhikkhus thus addressed them: "I am sent by the rája, with this command, 'Cause there the *Upósatha* to be re-established.' Lords! perform, therefore, instantly, the *Upósatha*." The bhikkhus replied: "Together with the heretics we will not perform the *Upósatha*." The minister, commencing from the pulpit of the chief priest, with his sword chopped off the head of each (who successively refused).

The théro, TISSO, observing this officer in the commission of this sacrilegious act, thus thought: "The rája would not send him to slaughter théros: most assuredly this must proceed from the misapprehension of this officer;" and (rushing up) placed himself in the seat of him who had (last) fallen. He (the minister) recognizing the théro (to be the brother of his sovereign) unable to use his weapon, repairing to the rája, thus spoke. "Déwo! I have cut off the heads of such a number of bhikkhus, who were recusant in the performance of

* I have met with this word written *Adúganga Pabbato*, which would signify "the mountain of the subterranean *Ganges*."

† Having four fires around them while the sun is shining, which made the fifth fire.

‡ The *Asókárámo* wiháro at *Pátilipura* named after ASOKO, by whom it was built, vide *Mahawánso*.

Upósatha; and in due order came to the turn of thy illustrious brother, the théro Tisso: what shall I do?" The rája, the instant he heard this, exclaiming, "Wretch! What? Thou sent by me to slaughter the bhikkhus?" and being answered, "Yes, Déwo!" agonized as if a flame had been engendered in his body! and rushing to the wiháro, he thus addressed the théros and bhikkhus. "Lords! this officer, unauthorized by me, has done this deed: by such (an act) on whom will the sin fall?" Some of the théros observed: "That person committed the act by thy direction: the sin therefore is thine." Others said, "The sin is equal in both of you." Others again thus spoke, "Why, mahárája! was it thy intention that he should go and slaughter the bhikkhus?" "No, lords! I sent him with a pious intention, saying, 'restoring the priesthood to unanimity, re-establish the *Upósatha*." "In that case, thy intention being pious, the sin rests with the officer alone." The rája perplexed (by the conflicting answers) inquired, "Lords! is there any bhikkhu, who is capable to restore me to the solace of religion, by removing this perplexity?" "There is, mahárája: his name is MOGGALIPUTTATISSO: he, removing this perplexity of thine, is capable of restoring thee to the solace of religion." On that very day, the rája dispatched four théros, learned in *Dhammo*, each with a retinue of a thousand bhikkhus and four ministers, each with a suite of a thousand persons, saying, "Return bringing the théro." They repairing thither, thus addressed (MOGGALIPUTTATISSO), "The rája calls thee." The théro did not come. For the second time, the rája sent eight théros versed in the *Dhammo*, and eight ministers each with a retinue of a thousand persons, who thus delivered their message: "Lord! the mahárája having desired us to say, 'he calls thee,' added, 'return not without bringing him.'" On the second occasion also, the théro did not come? The rája inquired of them: "Lords! I have sent twice, why does the théro not come." "Mahárája! he refuses to come, because he has been told, 'the rája calls.' On his being thus invoked he may come: 'Lord! religion is sinking: for the salvation of religion render thy aid to us!'" Thereupon the rája adopting that message, sent sixteen théros versed in the *Dhammo*, and sixteen ministers each with a retinue of one thousand persons. The rája also inquired of the bhikkhus: "Is the théro an aged, or a young person?" "Lord! (they replied) he is aged." "Lords! will he mount any vehicle, or a state palanquin?" "Mahárája! he will not mount one." "Lords! where does the théro dwell?" "Mahárája! up the river."

The rája then thus addressed his mission: "My men! such being the case, spreading a state canopy over a vessel, and accommodating the théro therein, and stationing guards of honour along both banks of the river, conduct him hither." The bhikkhus and ministers proceeding to the residence of the théro, delivered the message of the rája. On hearing this message the théro instantly rose, taking up the skin carpet (on which he was seated) saying: "From the commencement, my destiny in entering into the priesthood was the salvation of religion: now is my appointed hour arrived."

On a certain night, the rája had this dream. "To-morrow, the théro will reach *Patiliputto*." The dream comprised these particulars—a perfectly white state elephant approaching the rája, and feeling him from head downwards, seized him by the right arm (*dakkimá hatthé*). The following day the rája put this question to his interpreters of dreams. "I have had such a dream: what is to happen?" "Mahárája! there is some pre-eminent personage who will grasp an offering in his hand*."

* This interpretation involves a pun, on the above *Páli* words.

At that instant, the rája receiving the report that the théro was coming, repairing to the bank of the river, descended into the stream, till the water gradually rising, reached his knees; and approaching the théro, presented to the disembarking théro his *right arm*. The théro laid hold of his *right arm*. The sabred guards observing this, at once coming to this decision "let us decapitate him," drew their swords out of the scabbard. For what reason did they do this? Because such was the established practice in regard to royal personages. Should any person seize the arm of a rája, his head is brought down with a sword. The rája perceiving this (movement) by the shadow only (which fell by him) exclaimed "on account of an offence committed in a former instance, towards the priesthood, I am already deprived of peace of mind: offend not the théro also."

Why did the théro seize the rája by the arm?

As he had been sent for by the rája for the purpose of solving a (*panhan*) question, on that account, regarding him in the light of a disciple of his, he laid hands on him*.

The monarch establishing the théro in his own pleasure garden, and encircling it on the outside with three rows of guards (gave the order) "Watch over his safety." He then having bathed and anointed the feet of the théro, seated himself near him; and for the purpose of satisfying himself on this point. "Is the théro competent, dispelling my doubts and settling the controversy that has arisen, to save the religion?" thus addressed him: "Lord! I am desirous of seeing a miracle performed." "Mahárája! what description of miracle art thou desirous of witnessing?" "Lord! an earthquake." "Is it, Mahárája! the whole earth that thou desirest to see quake, or only a portion thereof?" "Of these, lord! which is the most miraculous?" "Why, Mahárája! in a metal dish filled with water, which would be the most miraculous, to make the whole or half the water, quake?" "Lord! the half." "In the same manner, Mahárája! it is most difficult to make only a portion of the earth quake." "Such being the case, lord! I will witness the quaking of a portion only of the earth." "For that purpose, Mahárája! with a line of demarkation, in circumference one yojano, on the eastern side, let a chariot be placed, with one of its wheels resting within the line. On the southern side, let a horse stand, with two of his legs resting within the line: on the western side, let a man stand with one foot resting within the line: on the northern side, let a vessel filled with water be placed, the half of it projecting beyond the line of demarkation."

The rája caused arrangements to be made accordingly.

The théro having been absorbed in the fourth *jhánaṅ*, in which is comprehended the half of the *abhiṅṅá*, rising therefrom, vouchsafed thus to resolve: "Let a quaking of the earth, extending over an yojana in space, be visible to the rája." On the eastern side, the wheel of the chariot resting within the line only, shook; the other did not shake. In the same manner, in the southern and the western sides, the feet of the horse, and the foot of the man, together

* It is not possible, in a literal translation, to convey *implied* significations. The dedication of a youth to be brought up a disciple in the priesthood is considered an offering. The circumstance of the rája in this instance seeking religious instruction, as a *disciple* would, is considered to place him also in the light of an offering; and hence the *grasping* his arm, is *the acceptance of an offering*.

with that moiety of their body resting within the line, shook. On the northern side, the half of the vessel also together with the portion of water (appertaining to that moiety) which rested within that circle, shook; the rest stood undisturbed.

The rája witnessing this miracle, and being thoroughly convinced then, that the théro was endowed with the power of saving the religion, thus submitted his own doubts for solution. "Lord! I sent a minister to the wiháro, saying, "Adjusting the (adhikarnán) matter in dispute, cause the *Upósatha* to be performed. He repairing to the wiháro, deprived so many bhikkhus of life: on whom does the sin fall?"

"Why, Mahárája! was it thy intention, that he, repairing to the wiháro, should slaughter the bhikkhus?"

"No, Lord!"

"Then, Mahárája! as thy intention was not such, the sin is not thine;" and thereupon for the purpose of demonstrating his reason, he explained himself by the following *suttán*, commencing with these words (of Buddho) "Bhikkhus! I am explaining that which constitutes an act *with intent*. *An act with intent* can only be committed by (the instrumentality of a member of) the body, by (means of) utterance, or by (the wilful design of) the mind." For the purpose of illustrating this subject, he discoursed thus from the * *Titira Játakán*. "Mahárája, in aforetime (in a former existence) in a certain country, a snipe thus inquired of a devotee. 'Many (snipes) flock to me, saying, 'our relation dwells here, and calamity befalls them (in consequence of that visit to me by being ensnared by the fowler). My mind is disturbed by painful doubts (as to whether the sin of that calamity rests on me).'

"The devotee replied, 'Was this thy intention; viz. enticing these (birds) either by the sound of my voice, or the attractive display of my person, let them be ensnared and destroyed.'

"'No, Lord!' rejoined the snipe.

"The devotee then thus summed up the matter:

"'If thou hadst no premeditated design, unto thee there is no sin. The act affects only the wilful, not the undesigning, agent: for it is thus said: "If the mind be not influence by malicious intent, the act committed will not affect the agent, nor will the taint of sin attach itself to the virtuous, who do not wilfully devote themselves (to sinful practices.")'"

The théro having thus exemplied the matter to thy rája, continuing to dwell for some days there, in the royal pleasure garden, instructed the monarch in the doctrines (of Buddho).

On the seventh day, the rája having assembled the priests at the *Asókáráma* wiháro, and having formed a partition with a curtain, and taken his seat (with Moggaliputtatisso) within that curtain, dividing the bhikkhus professing different faiths, into separate sections, and calling up each sect separately, thus interrogated them. "What faith did Buddho profess? Thereupon the professors of the *Sussata* faith, replied "The *Sussata* faith," and so did the *Ekachchasassatika*, the *Antanantika*, the *Amarachikkhápiká*, the *Asaniwáda*, the *Néwasaninásaniwádá*, the *Uchchédawádá*, and *Ditthadhammanibbánawádá*.

* The incarnation of Buddho in the form of a snipe, being one of his 550 incarnations. This parable is founded on the belief that snipes migrate in flocks, and that each flock has its peculiar chirp or cry.

The rája having previously been instructed in the doctrines (of the orthodox faith) readily distinguished that these were not bhikkhus, but heretics. Supplying them with white dresses, to be substituted for their sacerdotal yellow robes, he expelled them: the whole of them amounted to sixty thousand.

Then sending for the other priests, he thus questioned them.

"Lords! what faith did the supreme BUDDHO reveal?"

"Mahárája! the **Wibhajja* faith?"

On receiving this answer, addressing himself to the théro, he asked: "Lord! was the supreme BUDDHO himself of the *Wibhajja* faith?"

Being answered in the affirmative, the rája then saying "Lord! the religion is now purified: let the priesthood now perform the *Upasatha*;" and conferring on them the royal protection, re-entered the capital.

The priesthood assembling together performed the *Upasatha*. The number of bhikkhus who assembled there was sixty lakhs. The théro MOGGALIPUTTATISSO, suppressing in that community the professions of the creeds of other sects, propounded to them the *Kathávatthuppákaran*. And then selecting, and setting apart, from among the sixty lakhs of bhikkhus, one thousand bhikkhus, from amongst those who were the sustainers of the text of the three *Pitakani*, who had overcome the dominion of sin which is to be subdued, and who were masters of the mysteries of three *Wijja*,—in whatever manner MAHAKASSAPO and YASSO théro had held their convocations, on *Dhammo* and *Winayo*, precisely in the same manner, holding a CONVOCATION, and purifying the whole *Sásanan* from all impurity, he performed the THIRD CONVOCATION. At the close of the CONVOCATION, the earth quaked in various ways.

This CONVOCATION was brought to a close in nine months. It is also called the "SAHASIKA" because the CONVOCATION was composed of a (*sáhása*) thousand bhikkhus, and on account of two having preceded it, also the (*Tatiya*) THIRD CONVOCATION.

II.—*Note on the Geography of Cochin China, by the Right Rev.* JEAN LOUIS, *Bishop of Isauropolis, Vic. Apost. of Cochin China. Hon. Mem. As. Soc.*

[Translated from a memoir kindly communicated by the author †.]

Speaking of the geography of *Cochin China*, M. MALTE' BRUN, whose works on this subject are in many respects highly valuable, has not feared to advance that our knowledge of this country has become more obscure the more it has been handled by successive writers, who contradict one another. In spite of the respect due to an author of MALTE' BRUN's celebrity, (who nevertheless is, I believe, only a fireside geographist,—or, which is the same thing, a traveller

* Signifies "investigated," and † "verified."

† We must apologize to the author for presenting his contribution in English, a work of no small trouble by the way to an Editor, but the difficulty of printing in French would have much retarded the journal.—ED.

who has made the tour of his library,) I will venture to throw some light on what he has regarded as so obscure, and to prove that this country hitherto so unknown is now become familiar to many. "This country," says he, "once comprehended with Tong-king under the general name of *Anam*, was separated from it about 600 years ago, for the first king named, TIEN VUONG, who was also the first conqueror" in 1569, held the government until 1614, first as prefect or governor, then as king. "We are ignorant," says the same author, "under what particular name the natives then designated or now designate the country. That of *Anam* is too extensive a term:"—thus, according to our author's notions it is too extensive; but he favors us with no proof in support of his opinion. Ask a Cochin Chinese whence he is; he will reply, 'I am of the kingdom of *An nam*.' These two words signify the 'peace of the south;'—*an*, peace; *nam*, south. Some sovereigns of the country have endeavoured from superstitious motives to change this name to *Nam viét*, *Dai viét*, *Viét nam*; but these names, employed only in their edicts or in the laws of the realm, are not in vogue among the people, who always call themselves 'children of the country of *An nam*.' It is true that a stranger may sometimes hear natives in lieu of *An nam* pronounce the word *Ai nam* or *En nam*; which is thus explained. Superstition, and a pretended respect for some of their parents' relations or ancestors forbid their pronouncing certain names. Thus for example, if you ask a Cochin Chinese whose father bears the name of *An*, whence he comes?—He will tell you, from *Ai nam*.

The name of *An nam*, which we translate in Europe by that of *Cochin China*, is the real name of the country. It is also that which is employed uniformly in Chinese books to designate it, although our geographer pretends, that the Japanese have it the name of *Cotchin-Djina*, 'country to the west of *China*;' and that Europeans thence came to employ the same term. I believe on the contrary that the origin of the name of Cochin China is rather to be sought in the two words *China*, and *Cochin*. The Portuguese who came first to the Indies having fancied some resemblance between the coast of *An nam* and that of *Cochin* on the *Malabar* side of India, and connecting this with its proximity to *China*, gave it the joint name of *Cochin China*, that is, the Chinese *Cochin*.

Here again arises another question, what are the limits of this country? "La nature des lieux, l'extension de la nation et celle du language Européen bornent le nom de Cochin Chine, ou si l'on veut d'*Anam meridional* à la côte qui s'étend depuis le Tong-king jusqu' à Ciampa, sur 110 lieues de long; et 10 a 25 del arge. Nous

n'abandonnerons point cet usage commode." It is our author who speaks: but how melancholy is it for the reader to hear a man of talent thus framing geographical systems in his head, and refusing to follow newer or more exact information because it does not tally with the "usage commode," or to speak plainly, because it would give a little more trouble.

"If recent or ephemeral conquests," says he, "have brought the coasts of *Camboge* under the rule of the king of Cochin China, this is no reason for changing a nomenclature founded on the difference of nations and on the situations of countries. The geography of the province, offers still greater difficulties. Those who, like some modern navigators, extend Cochin China up to the point of *Camboge*, divide it into three parts, *upper*, *middle* and *lower*, or the province of *Hué*." Here, in placing *Hué* in *Lower Cochin China*, the geographer commits a grave error, for that country is situated in *Upper Cochin China*. "The older travellers," says he, "give a much more complex division to the country, and one perhaps more exact, but at the same time obscure; by this we will endeavour to determine the following provinces, proceeding from north to south."

Since M. Malte' Brun prefers the most complicated divisions, and even those he acknowledges to be most indistinct, I leave him willingly to indulge in his peculiar taste. A residence of many years in Cochin China having enabled me to run over all the provinces from the 17th to the 9th degree, north lat., I will attempt to clear up what has seemed to him to be so obscure.

The division of Cochin China into three parts is certainly the most convenient. Going from north to south and beginning with about 17° 30′ north lat. the first province, or prefecture, is called *Quang bịnh*, the second *Quang tri*, and the third *Quang dú'c*. These three prefectures compose what is properly called '*Upper Cochin China*,' or vulgarly '*Hué*,' (or sometimes *Phu ? xuân**) from the name of the capital which lies in the prefecture of *Quang dú'c*. But this name *Quang dú'c* has been changed by the present king. Pretending to be the son of heaven and aspiring to give a name in harmony with this high title, he has designated it *Phu ? thú'a thiên; i. e.* 'province which enjoys the influence of heaven!'

Before passing to other provinces, I would observe that the terms I employ to designate the names of provinces are those most in use;

* The interrogative sign here denotes that the *u* is to be pronounced with a rising intonation of voice—we have not the various type necessary to express the native words according to the Bishop's system.—Ed.

and best known to the inhabitants: for there are provinces which have received new names from his majesty, though such are only employed in edicts and in the writings of the mandarins, the people adhering to the ancient appellations. For example the prefecture of *Dôngnai*, or province of lower *Cochin China*, is now called *Biên hoa*, and the part known by the Europeans under the name of *Sài gòn* is now called *Gia dinh**. (In writing the native names in Roman characters, I follow the method adopted alike by all missionaries of different nations for the last 200 years. The same may be said of the Tongking names, but as in the latter language there are sounds foreign to the European ear, it is necessary to introduce new symbols to express them. For this purpose the letter nearest approaching the sound has been modified by the addition of some accent or diacritical mark, which will be found explained in the preface of my dictionary now under publication, but which it would be out of place to enter upon in a note on geography.)

Central Cochin China commences about lat. 16°, extending to about 10° 45′. It comprehends six provinces, or prefectures, viz. *Quang nam* or *cham:* in this province is situated the fine port of *Touron* named *Hàn* by the Cochin Chinese. Four or five leagues south of this bay is the city of *Phai-phó* which was for a long time the focus of the commerce with foreign countries. The wars which desolated this kingdom

* If it be asked why are these changes? I will answer, that frequently superstition has most to do with it. Sometimes the old name has not been thought noble enough—and sometimes simple caprice has guided his majesty's will which none dare thwart. Tota ratio est voluntas facientis. It is thus that from a whim the king will rase a whole city and re-erect it at some distance, or on an opposite bank of the river? Can one then accuse a geographer of ignorance if at the epoch of his making a map, the city was placed on the left side of the river, because it happens now to be on the right? I make this remark in reference to the map of Cochin China which will appear with my dictionary. In 1835 the strong town of *Sai gòn* in lower Cochin China has been utterly destroyed because his majesty chose to build another at some distance, but I know not yet the precise position of the new town. Why is this? I have said above. Again in 1833 the town of *Sài gòn* was taken by a pagan mandarin who withstood a siege for near two years. When the king's troops succeeded in October 1835, in retaking the place, his majesty guided by superstition, discovered that the situation of the town was not propitious:—and that a diviner should select a better, whither it was accordingly transferred. The diviner will have assured the king that under the new spot dwelt the great dragon for which they have so great a veneration. It is thus that the king revenged himself on the infidelity of his subjects in this province, who were made to labour night and day for 10 or 15 years in constructing this new town,—their only recompense being the *cangue* and the *rotan*.

towards the close of the last century have given a mortal blow to this town. It is now inhabited partly by Chinese, who keep up a thriving commerce with their countrymen. The country is fertile and picturesque. It is on the south-west of these mountains that the Cochin Chinese resort to procure the canelle or cinnamon which is preferred in *China* to that of *Ceylon*. A three-days march takes you through this province into the neighbouring one of *Quang ngai* or *Hoa ngai*, which has less breadth than the preceding, but which runs back from the seashore towards the mountains inhabited by the *Moi*, the most terrible of the savage races that occupy the whole chain of mountains skirting the kingdom. Cinnamon is here also made, but sugar is the chief object of traffic. The frequent incursions of the hill savages to repossess themselves of the plains, forced many of the inhabitants to retire. Since the last 40 years they have succeeded in restraining the wild people in their forests, and the population is again increasing.

From *Hoa ngai* you pass into one of the finest provinces of the realm, where from 1780 to 1793 was the capital of one of the usurpers known under the name of *Tây so'n* or mountaineers of the west. Its ordinary name is *Qui nho'n*; others call it *Qui phu ?*, or *Biñh dinh*. It possesses many ports, but the finest and most vast is that known by the name of *Cu'a gia*. In every part of this province are to be seen those half-ruined brick towers which prove that the country once belonged to the ancient and powerful kingdom of *Ciampa*, reduced about 80 years ago, by the Cochin Chinese who have raised themselves on its ruins.

It has many cocoanut-trees; the oil of this fruit and the ropes prepared with its fibre, as well as the *areca* (betel) and some little silk form its principal branches of commerce.

Next follows the province of *Phú yén*, which forms a kind of amphitheatre, and offers to the view fine fields of rice, gardens of *areca* and betel, in the midst of which appear here and there the humble habitations of the rich proprietors. This province furnishes the best horses in the kingdom. It is separated from the province of *Nha trang* by one of the highest rocks or mountains of the country, which is thence called *Deò ca ?*, or 'chief of mountains.' This province extends for six days' journey: it is thinly peopled. It is here that a French officer built a strong town about three or four leagues from the port of the same name. It stood two sieges, one in 1792, the other in 1793 without falling into the hands of the rebels. They cultivate the mulberry here with success and maintain a thriving business in silk. This province produces the species of *baumier* called *amyris ambrosiana*. It runs from the tree of a blackish color, and has a smell which may vie with the liquid amber of *Linnæus*.

The last province of central Cochin China is *Biñh Thuán.* This province was formerly the seat of the capital of the kingdom of *Ciampa,* whose inhabitants, now reduced greatly in number, have retired to the foot of the mountains, abandoning to their new masters the sea coast as well as the long sandy range (parage) called the desert of Cochin China.

Ciampa was formerly a considerable state, known to Europeans only at the time of its decline. Before the 15th century of our era, this kingdom was bounded on the north by *Tongking,* on the south by *Camboge,* on the east by the sea, and on the west by *Laos* and the mountains of *Yun nam.* The latter people has several appellations among the Cochin Chinese;—such as *Lôi, Thuán, Thiéng,* &c. It appears from the chronicles of *Java* that they had a brisk intercourse and close relation with the inhabitants of the Malayan archipelago. In the 15th century the queen-wife of the chief sovereign of the isle of *Java* was a daughter of the king of *Ciampa.* Ebony is very common in this country, but the wood which is the most precious, and which is sufficiently abundant is called 'eagle wood,' of which the first quality sells for its weight in gold; the native name is *Kì nam.* This wood, so celebrated among the orientals for its agreeable perfume, possesses also medical properties.

The province of *Biñh thuán* stretches from about lat. 11° 45′ north to 10° 45′; where commences lower Cochin China; which comprehends all that part of *Camboge* overrun by the Cochin Chinese. This province called *Dóñg nai,* sometimes *Sài gòn* by the natives and Europeans, is properly named *Gìa dinh.* It includes six prefectures. The first and nearest to *Biñh thuán* is called *Biên hoa* or *Dóñg nai;* the second, *Phan yên* or *Sài gòn,* which is the fortified town of the same name. The third is *Dịnh Tư'ò'ng,* vulgo *Mi tho;* the fourth is *Vinh thanh* or *Long hó:* the fifth *Châu dòc* or *An giang.* The sixth is at some leagues from the sea, and is called *Hà tiên,* and by the Europeans, *Cancao.* This last prefecture extends its jurisdiction from the island called *Hòn tram* in the gulf of *Siam,* to about lat. 10° 40′ N. It is this which separates the kingdom from *Siam.* It is on this island also, (which signifies isle of the guard) that is stationed a legion of soldiers destined to guard the frontier. On the south, the island of *Pulo-ubi,* (or isle of the *igname* plant) situated in lat. 8° 25′ north, forms the extreme limit of the kingdom.

From the above sketch it is seen that Cochin China contains fifteen prefectures and only ten provinces; for the vast province of *Gia dinh* comprises within itself six prefectures. All these provinces are ranged along the coast.

Tongking, which since 1802 has been reunited to the kingdom of Cochin China, has twelve provinces, and fourteen prefectures. Two provinces, those of *Thaun* and *Nam* have each two prefectures. The first beginning with lat. 17° 30′ N. is usually known as *An* or *Nghé an*. It is on the other side of the river *Sóng gianh* which formerly separated the two kingdoms.

Here follow the names of the other prefectures, proceeding northward to lat. 23° 30′, viz.: *Thanh nói, Thanh ngoai, Hung hoa, Nam thu'o'ng, Nam ha, Hai dóng, Kinh bắe, So'n tay, Cao bằng, Lang bắe, Thai nguyén, Tuyén Quang*, and *Yén Quang*. This last rests on the Chinese province of *Cangtong*.

Four of the provinces above enumerated are distinguished as eastern, western, southern and northern, respectively, according to their situation as regards the royal town which is placed in the centre of the four, and which is called *Ke ? cho'* or *bắe thánh*. They are also named 'the four governments' embracing therein six other provinces. The two remaining are called 'the outer government.'

The province of *Xú' thanh*, which is divided into two prefectures, or *trán*, is celebrated in the empire of Cochin China as being the country of the three royal dynasties: first, of the dynasty of *Lé*, or of the *Vua*, or kings of *Tongking*, whose princes latterly only retain the empty title of king, without taking any share in the administration:—the dynasty of *Trinh*, which although it never held a higher title than *Chúa* (lord, or regent), exercised all authority in the state:—and thirdly, the dynasty of *Nguyen*, which after holding the rule in Cochin China as *Chúa* or regent, broke from the yoke of *Tongking*, and has exercised absolute and independent sway for thirty-four years over *Tongking* and Cochin China combined. Five provinces may be distinguished as maritime, to wit; *Xú' nghé*, or *Nghi an, Thanh nói*, and *Thanh ngoai, Nam thu'o'ng* and *Nam ha, Hai dong* and *Yén Quang*.

The province of *Nam*, or south, though not the most extensive is the most beautiful and the best peopled. It has hardly any mountain tracts, while the other provinces on the contrary have many mountainous than level ones. *Ke ?cho'*, the ancient capital of *Tongking* belongs properly to none of these provinces. It serves as a focus or common centre to the four principal provinces as before stated. Its name of *Ke ? cho'*, which signifies the market, or chief market, is the vulgar appellation of the town. Its real name is *Thanh long thành*, the city of the yellow dragon. It was constructed in the commencement of the seventh century, when *Tongking* was only a province of the Chinese empire, governed by an officer of the emperor. It was then called *La Thinh*, or city of *La*. Towards the end of the tenth century, the first king of

the dynasty *Dinh* erected another town in a place more to the west, called *Hoa lu*. It served but a few years as a residence of the *Tongking* kings. After 40 or 50 years they abandoned it and now the traces of its existence are hardly to be discovered. The first king of the dynasty *Ly*, who mounted the throne in 1010 re-established the town of *Thánh* and changed its name to that of *Thánh long thánh*, or city of the yellow dragon, because of a pretended vision that this prince had on the great river. Although *Tongking* is watered by a great number of rivers and streams, the most remarkable is that to which is given the name of *Tóng-ca ?*, or great river. I may remark here that none of the rivers of *Cochin China* has any distinctive name applicable to its whole course. The natives employ the general term of *Sóng*, river, adding thereto the name of the principal place by which it passes: so that the river changes its name continually, and the name employed applies directly to the portion of its course intended to be alluded to. The great river of *Tongking* has its sources in the mountains of *China*. It runs north-west to south-east, traversing the provinces of *Tuyén Quang*, of the west, the royal town, and the province of the south, at the foot of which it discharges itself through several channels into the sea at the bottom of the gulf of *Tongking*. About 50 years ago vessels used to mount the river as high as *Hién* or *Héam*, about 25 leagues from the sea, where the French and English had formerly a factory; but now the mouth of the river is obstructed by shoals which no longer permit vessels to enter. The large native *barques* even find difficulty now in entering*.

I have observed, for the sake of perspicuity, that the number of prefectures exceeded that of the provinces, because certain provinces were subdivided into several districts. The word province is called *Xứ* in Cochin Chinese, and prefecture *Trấn*. Although the number of prefectures has not increased and the provinces remain in *statu quo*, some changes have been made in the mode of administration in 1833. Minh Mang, well versed in Chinese literature, seeks always to equal if he cannot surpass his model, the Chinese emperor. Minh Mang then has united two prefectures under the inspection of one superior mandarin. The prefecture in which the latter resides is called *Tỉnh*, or 'chief place of the provinces.' This first commander bears the name of *Thóng dóe*. The prefecture which is attached to the 'head-quarters' of the province is called *Sanh*, and the civil prefect bears the title of *Ong bó chánh*: he is assisted by a prefect or criminal judge who is called *An sát*.

* The English office was very pleasantly situated to the north of the town of *Ketcho'* on the banks of the river, that of the Dutch was originally close to it.

The *Pracel* or *Parocels*, is a labyrinth of small islands, rocks and sand-banks, which appears to extend up to the 11th degree of north latitude, in the 107th parallel of longitude from Paris. Some navigators have traversed part of these shoals with a boldness more fortunate than prudent, but others have suffered in the attempt The Cochin Chinese called them *Cón uáng*. Although this kind of archipelago presents nothing but rocks and great depths which promises more inconveniences than advantages, the king GIA LONG thought he had increased his dominions by this sorry addition. In 1816, he went with solemnity to plant his flag and take formal possession of these rocks, which it is not likely any body will dispute with him.

III.—*On the Bibos, Gauri Gau or Gauríká Gau of the Indian forests. By* B. H. HODGSON, *Esq. Resident in Nepal.*

To the Editor Journal Asiatic Society.

I have the honor to submit to you the following subgeneric and specific characters of that magnificent wild *Bovine* animal, whose skull Mr. EVANS recently exhibited in your Society's rooms. Amongst my drawings, transmitted to England two years ago, you may remember to have seen delineations of this animal's cranium, pourtrayed comparatively with those of *Bubalus*, *Bos* and *Bisonus*. The distinctive characters, as therein depicted, were certainly sufficiently striking, and were noticed by me at that time: but, until I had had opportunity to examine the whole bony frame of both sexes, I did not venture to give public expression to my conviction that this animal would be found to constitute a new type of the Bovidæ. I have recently had such opportunity, and my hesitation has ceased. I have no longer any doubt that the *Gouri Gau* of the *Saul* forest and of the hilly jangals of south *Behar*, is neither a *Bos* nor a *Bison*, but an intermediate form; and, from the vague indications of writers, I apprehend that the *Fossil Urus* of Europe*, and ARISTOTLE's Persian wild bull with depressed horns, were other species of the same type.

Whether our species be identical with the *Gaurus* or with the *Gayæus* of authors, it is impossible to conjecture; since the descriptions of them amount to little more than the tittle-tattle of *sportsmen*, most unwarrantably (as I conceive) adopted into science by men like TRAILL, G. St. HILAIRE, and H. SMITH, who have, some of them, made *Bisons* of these animals, and others *Tauri*, according to the almost unaided dictates of mere imagination! My subgeneric and specific characters are both prolix; but so long as our classification continues

* There are two animals bearing the name of *Bos Urus*.

in its present crude state, this prolixity cannot be avoided. You already possess a good delineation of the skull*: I subjoin herewith one of the bony trunk. From the combined characters of the two I deduce my subgeneric designation; and to prove the fixedness of those characters, I may add that they are equally conspicuous in both sexes; the most remarkable perhaps of them—viz. the signal development of the spinous processes of the dorsal vertebræ, being also fully revealed in the fœtus in utero† !

The trunk I have sketched for you‡ is that of a female; and you have but to compare it with the trunk of a cow (any breed) to perceive in how signal a degree the superior length of the spinous processes adverted to, distinguishes *Bibos*. Owing to this osteological peculiarity, the back of the living animal, when the head is down (as in the act of grazing) describes almost half a circle from nape to tail. But, owing to the slight development of the analogous processes of the *cervical* vertebræ, and to the extraordinary height of the frontal crest of the head, the state of quiescence in the living animal (the stand at ease) exhibits a deep fall between the head and shoulders, very unlike the continuous downward sweep from nose to croup which is attributed to the Bisons, and is ascribed in them to the development of the spinous processes of both *cervical and dorsal* vertebræ, half and half in both. If this be so, the position of the ridge will constitute the distinction, quoad hoc, between *Bibos* and *Bisonus*, as the possession of it by both will constitute a strong affinity between the two groups, and one which it is of peculiar importance to mark, with reference to those principles by which structure seems to be governed throughout the ruminating animals.

On the other hand, the relationship of *Bibos* to *Bos proper* is sufficiently apparent in their common possession of thirteen pairs of ribs, a broad flat forehead, (exclusive of the peculiar frontal crest) and a smooth glossy fine coat, though the value of the last character may be open to reasonable objection.

The size and weight of the skull in *Bibos*, as compared with *Bos proper*, are vastly greater than general proportion would require, if they were organized on the same principles: and to this superior weight of the head in the former must be referred, as to its cause, that signal development of the spinous processes of the dorsal vertebræ spoken of.

* See Plate XVI. of the present volume.

† I recently procured a specimen of the fœtus from the mother's womb. It was about two months old.

‡ See Plate XXXIX.

We have no instance of this latter peculiarity in any proper *Bovine* animal: and, as it is developed even in the womb in *Bibos*, characterising before birth the *females as well as the males* of the *race*, we need look no further for an essential difference of structure between *Bos* and *Bibos*.

One word as to the specific name. *Subhemachalus* is bad, because I have now every reason to believe that this animal is found in various and remote parts of India. *Gaurus* and *Gavæus* are bad, because a host of errors cling to the extant descriptions of both, and because we can neither distinguish between the two, nor affirm safely that our animal is identical with either. Names taken from peculiar structure are perhaps the best. Wherefore I would propose the specific name of *Cavifrons* for our animal, as the type of this new form, of which one peculiarity is the concavity of the forehead, caused by that terminal ascending sweep of the frontals which carries them above the highest edge of the bases of the horns, notwithstanding the extraordinary dimensions of the latter. The horns spread latitudinally, both *before* and *behind* the utmost breadth of the frontal crest, but *not* above it. In well grown males the extreme superior limit of the bases of the horns is from one to two inches below the crown of the frontal crest: I am not aware that this inferior position of the horns, nor their strong tendency towards the Bubaline shape (depressed and angular) is to be traced in any true *Bovine* animal.

The popular name of Gauri's bull (from *Gauri* the wife of *Siva*) might suggest the sufficiently euphonious and appropriate appellation of *Gaurianus*, but it is objectionable, because I have reason to believe that its popular proto-type is applied indiscriminately to all the wild bulls of India, some of which are propably *Bisons* (as *Gaurus*) and others, probably congeners of our *Bibos*.

RUMINANTES, BOVIDÆ.

Genus *Bos*; Subgenus (?) *Bibos*, nob.

Subgeneric characters.

Head and forequarters exceedingly large. Cranium bovine in its general character, but much more massive and depressed: its breadth between the orbits equal to the height, and half of the length: frontals extremely large in all their proportions, deeply concave and surmounted by a huge semicylindric crest rising above the bases of the horns. Posteal plane of the skull vertical, equal to the frontal plane, and divided centrally by the lambdoid crest. Orbits more salient, and rami of the lower jaw straighter, with less elevated condyles, than in the *Bos*: thirteen pairs of ribs. Spinous processes of the dorsal ver-

tebræ extremely developed with gradual diminution backwards, causing the entire back to slope greatly from the withers to the croup. Neck sunk between the head and back. Dewlap evanescent. Horns short, very thick and remote, depressed, subtrigonal, presenting the acute angle of the triangle to the front.

1. Species new and type, *Bibos cavifrons,* nob. *Gauri gau* of Hindus. Habitat, *Saul* forest.

Specific character.—Large wild Indian *Bibos* with fine short limbs; short tail not reaching to the houghs, broad fan-shaped horizontal ears; smooth glossy hair of a brown red or black color, paled upon the forehead and limbs; tufted knees and brows, and spreading green horns with round incurved black tips, and with soft rugous bases, furnished posteally with a fragrant secretion.

10 feet long from snout to rump, and $5\frac{1}{2}$ feet high at the shoulder; head (to the crown of forehead) 23 inches, and tail 33 inches. Female rather smaller, but preserving all the characters of the male.

N. B. To all appearance two other species of *Bibos* may be found in the fossil Urus of Europe, and in ARISTOTLE's wild bull of Persia with depressed horns. These I would call, respectively.

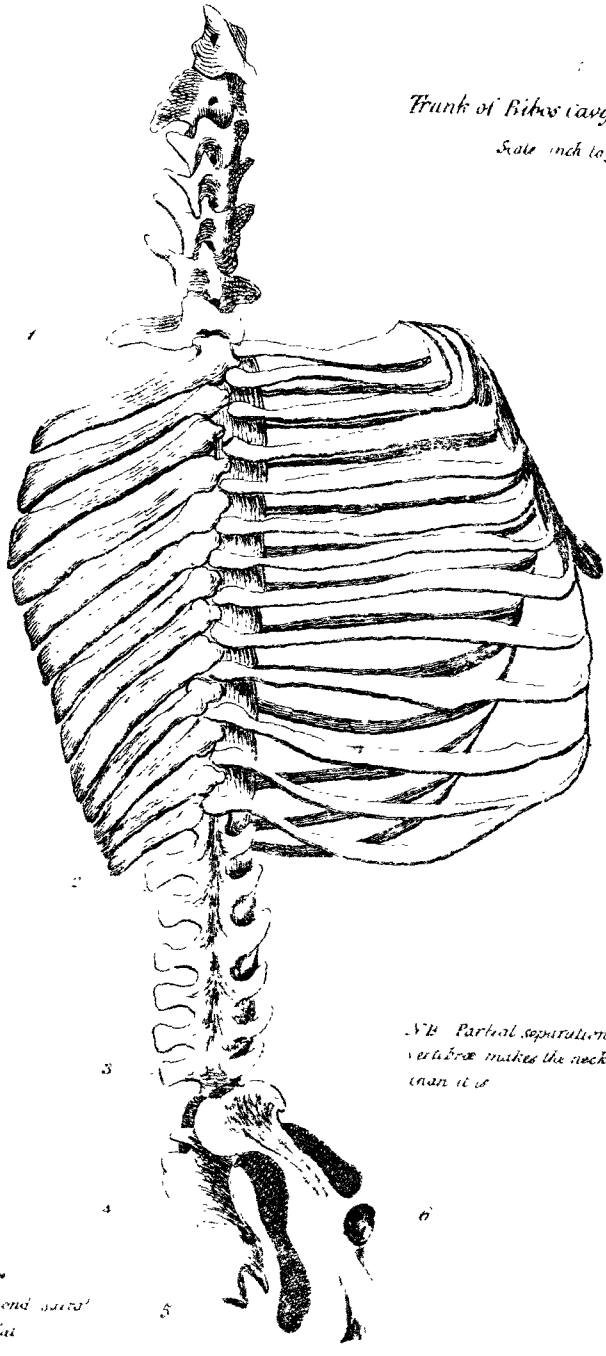
2. *Bibos Classicus.*
3. *Bibos Aristotelis.*

Nor are these animals thus mentioned idly: for the suggested new allocation of them may stimulate curiosity: travellers in Persia may possibly yet discover the living species alluded to by ARISTOTLE; whilst if further research into the fossil remains of the ancient Urus of Europe should bring to light the trunk as well as skull of that species, it would be a most interesting circumstance to find that our Indian forests yet shelter a type of form long since swept from the surface of the globe in the Western world: and the proximity of the *Himálaya* renders such a contingency at least probable.

The *Gauri Gau* never quits the deepest recesses of the *Sál* forest, avoiding wholly the proximate *Tarái* on one side, and the hills on the other. It is gregarious in herds of from 10 to 30, the females much preponderating over the males in the herds, though even in a small herd, there are usually two or three grown males whose conjoint office it is to guide and guard the party. This office is discharged with uncommon alertness, proving the animal to possess great perfection in all the senses, and with indomitable courage too, if need be; so that neither tiger, nor rhinoceros, nor elephant dare molest the herd. During the heat of the day the herd reposes in the deepest cover, coming forth at morn and eventides to feed on the small and open pastures interspersed throughout the forest. Here the animals

Trunk of Bibos cavifrons nob. fœm.

Scale inch to foot.



NB Partial separation of the cervical vertebræ makes the neck seem longer than it is

1. *1st Cervical*
2. *1st Lumbar*
3. *6th & last Dr*
4. *the 4 Synchond sacri*
5. *the 1st Caudal*
6. *Acetabulum*

London. Ackermann Press. Cale. Ind.

spread, of necessity, in order to feed, but in moving to and from their pastures, they advance in single file, along the narrow beats made by themselves, by elephants, rusas, and other large tenants of this solitary and seemingly impenetrable wilderness.

On an elephant and in the day time you may, if you show yourself distinctly, approach the herd with facility, and I have seen the males stand with a careless indifference within a few paces: probably because they fear not the wild elephant, and are never molested by sportsmen with the aid of the tame one, the sastras having decreed that the "*Gauri* is like unto *Bos*." No gentleman of the country will attempt to kill the *Gauri*; and plebeians, if they have less tender consciences, have ordinarily no adequate appliances for the work.

Men of low caste, who have pursued the animal to death, with the aid of good guns, describe the chase as very exciting. You must plunge into the deepest part of the forest; eschew all cooking, because of the odours exhaled; and all dress, because of its unusual colors.

Three or four men, provided only with water and parched grain for food, proceed to the vicinity of the known haunt of a herd, and, taking up their abode in a tree (for fear of tigers) thence descend daily to 'stalk' the animals, on their feeding ground. The quarry found, the huntsmen spread, under cover of the jangal, and surround the little grazing plot. In doing so, they carefully avoid getting 'between the wind and the nobility' of the *Gauri*, for he has an exquisite sense of smell; and, should a keen eye be hesitatingly directed on the moving huntsman, he must instantly stand like a stock, till the suspicion fade away. In this manner the approaches are made, and many times without success, owing to the vigilance of the herd which the least unusual symptom causes to retire into the thick jangal, and often with astonishing speed considering the bulk of the animals. In such case the hopes of that day are blighted wholly: but, should no suspicion be excited, and the party, or some member of it, be able to creep within 30 or 40 paces, with a tree at hand to retreat upon, the fire is given, and the tree instantly climbed, if the point of assault have been perceived by the wounded animal. Otherwise, the cover is kept, and the fire repeated; for, it is seldom fatal at once, and the whole indignant herd, possibly, but, more probably, the wounded individual of it, will scorn retreat, seeking only to discover the injurer. Woe betide him if he *be* discovered and cannot climb his tree; for the sufferer will exact a fearful vengeance, and, not satisfied with death, will gore and trample the corpse to pieces. If the tree be gained, a signal proof of the indomitable spirit of the *Gauri* is afforded, and this whether the climber have succeeded in taking up his gun with him, or

not. In the latter case, he may starve, unless his comrades shoot the *Gauri*. In the former case, he may work his will on it; for living, it will not stir from the spot without vengeance; and though a gun be pointed in its very face, and repeatedly discharged, it will continue goring the tree and threatening the assailant, till dead. In cases in which the luckless climber has dropt his weapon, and his companions have feared to come presently to the rescue, the *Gauri* has been known to keep its station at the bottom of the tree for 24 hours, and, it is believed, would never have stirred from the spot, so long as the man was above if the animal had not been eventually destroyed. The Tharús, a tribe of native foresters, assert that the *Gauri's* period of gestation is longer than that of the cow; and, from the appearance of the fœtus in utero, there can be little doubt that the season of love is February, March. One calf only is produced at a time.

The raw-fœtal young is white-skinned; its hoofs are golden yellow; and its head perfectly rounded, in all the cerebral portion.

The voice of the *Gauri* is very peculiar, and quite unlike that of the ox, buffalo or bison, but, as I am not skilled in bestial tongues, I shall not attempt to syllable this utterance.

IV.—*Extracts translated from the Granthas or sacred books of the Dadupanthí Sect. By Lieutenant* G. R. SIDDONS, *1st Light Cavalry, Second in command, 3rd Local Horse, Neemuch.*

As I find from the perusal of the May number of the Asiatic Journal that you consider my translation of a chapter from the *Dadupanthí Granthas* interesting, I do myself the pleasure to forward you another 'On meditation.' I may as well observe, that they are not from the commencement of the *Grantha*, but selected by me as being in my opinion best qualified to shew the moral and religious ideas of the sect.

When not interested in the subject, I chanced to visit one of the *Dadupanthí* institutions at a village near *Sambhur* and was particularly struck by the contented and severe countenances of the sectaries. There were a Principal and several Professors, which gave the place the appearance of a college. The former occupied a room at the top of the building, and seemed quite absorbed in meditation; the professors however were communicative enough, though I did not make any inquiries concerning the founder of their sect, for which I am now sorry, because it does not seem accurately known who DADU was*, and I have been assured, perhaps not from the best autho-

* See page 480 which had not reached the author when this was penned.—ED.

rity, that he was born a Mussulman. The sect is maintained by the admission to it of proselytes, and marriage is, I believe, forbidden, as also the growing any hair about the face, which gives to the priests the appearance of old women. If I should again have an opportunity of making inquiries regarding Dadu I will not overlook it. In the meantime, I beg to subscribe myself, &c.

G. S.

विचारको अंग।

दादू जल मे गगन गगन मे जल है।पुनि वै गगन निरालं।
ब्रह्मजी। वहहि विधिर है ऐसा भेद विचारं। १।
झूंदरपन मैं मुख देखिए पांणीं मैं प्रतिबिंब।
ऐसैं आत्मा राम है दादू सबही संग। २।
जब दरपनमां हैं देखिये तब अपनां रूपौआप।
दर्पण विन रूपौ नहीं दादू पुनि सब पाप। ३।
दादू जियेंतेल तिलंनि मैं जियेंगंध फुलंनि।
जियें मधुप छिर मैं ईंधेंरवुरु हंनि। ४।
दादू जिनि यह दिलमंदिर किया दिलमंदिर मैं सोइ।
दिलमां हैं दिलदार है और न दूजा कोई। ५।
मीत तुम्हारा तुम्हक्त हैं तुमहींलेहु पिछांनि।
दादू दुरिन देखिये प्रति विंब ज्यूं जांनि। ६।
दादू नाल कवल जल उपजै ज्यूंजु दाजल मांहि।
वंदचिंहित चित प्रीतडी यो जग मेतोनांहि। ७।
दादू एक विचारसौं सब यैं न्यारा होइ।
मांहैं है परमन नहीं सहजिनिरं जन सोइ। ८।
दादूको टिचचारिन एक विचारी तजनसर भरिहोइ।
आचारी सब जगमखा विचारी विरला कोइ। ९।
दादू घट मैं सुषआनंद है तब सब ठाहर होइ।
घट मैं सुषआनंद विन सुषोन देखा कोइ। १०।
मोटीमाया न जिमये सुष्यमलोयें जाई।
दादू को छूटै नहीं माया बडी बलाई। ११।
दादू सुष्यममांहि ले। तिनका को जैत्याम।
सवत जिरातारांमसां। दादू।यह वैराम। १२।
मुख अतीत सो दरसनी आपा धरै उठाइ।
दादू निर्मुख रांमहि डोरी लागा जाइ। १३।

खंड मुकति सबको करै प्रांण मुकति नहीं कोई।
प्राण मुकुति सतगुर करै दादू विरला कोइ। १४।
दादू क्षुधावंत कूं भूखिये सीत तप ति कूं आइ।
कूं सब छूटैं देह गुण सतगुर कहि समझाइ। १५।
मांहीथी मनका डिकरि लेरावैनिज ठौर।
दादू भूलैदेह गुण विसरि जाइ सब चौर। १६।
नांव भूला वैदेह गुण जीव दसासव जाइ।
दादू जाऊनांवकौं तौ फिरिलागै आइ। १७।
दादूदिन दिन रातारांम सौं दिन दिन अधिक सनेह।
दिन दिन पीवैरांम रस दिन दिन दरपन देह। १८।
दादू दिन दिन भूलैदेह गुण दिन दिन इंद्रीनास। ०।
दिन दिन मन मन सांमरै दिन दिन होइ प्रकास। १९।
देहरहै संसार में जीव रांमके पास।
दादू कुछ व्यापै नहीं काल झाल दुखनास। २०।
काया की संग तितजै बैठा हरि पदमांहि।
दादू निरभय है रहै कोई गुण व्यापैनांहि। २१।
काया मांहैं भय घणां सब गुण व्यापैं आई।
दादू निर भय घर किया रमे नूर में जाइ। २२।
षडम धार विषनांमरै कोई गुण व्यापै नांहि।
रांमर है त्यूंजमर है काल झाल जलमांहि। २३।
सहज विचार सुख में रहै दादू बडा विवेक।
मन इंद्रीपसरै नहीं अंतरि राखै एक। २४।
मन इंद्री पसरै नहीं ज्यूं निसिरकैध्यांन।
पर उपमारी पांखियां दादू उत्तम ग्यान। २५।
मैं मांहीं तब नांव क्या कहा कहा वैं आप।
साधीक है विचारि करि मेटौतन की ताप। २६।
जब समझ्या तब सुरझिया गुर सुधिग्यान अलेष उलटिस मांनां सोई।
कबूक हावैज वहमें तब भ्रम समझ न होइ। २७।
जब समुझ्या तब सुर झिया। गुर सुधि ग्यांन अलेष।
उरध कवल में आरसा। फिरि करि आपादेष। २८।

प्रेम भगति दिन दिन बधै। सोई ग्यांन विचार।
दादू आतम सोधि करि मथि करि काढ्यासार। २९।
दादू जिहि वरियां यज्ञ सब कुछ भया। सो कुछ करै विचार।
काजी पंडित बावरे। क्या लिख बंधे भार। ३०।
जब यज्ञ मनहीं मन मिल्या। त। कुछ पाया भेद।
दादू ले करिलादिये। क्यापढि मरिये वेद। ३१।
पांणीं पावक। पावक पांणी। जांणैं नहीं अजांण।
आदि अंति विचार करि। दादू जांण सुजांण। ३२।
सुषमां दैं दुष बहुत है। दुषमां दैं सुष होइ।
दादू देष विचार करि। आदि अंत फल दोइ। ३३।
मीठा खारा खारा मीठा। जांणै नहीं गंवार।
आदि अंति मुष देषि करि दादु। किया विचार। ३४।
कोमल कठन कठन है कोमल। सूरष सर मन वूझै।
आदि अंति विचार करि। दादु। सब कूछ सूझै। ३५।
हे प्राण पहिली विचार करि। पीछे पग दीजै।
आदि अंति मुष देषि करि। दादु कुछ की जै। ३६।
पहिलो प्रांण विचारि करि। पीछे आवै आइ।
आदि अंति मुष देषि करि। दादु रहै समाइ। ३७।
दादू सोचि करै सो सूरि वां। करि सोचै सोकूर।
करि सोच्यामुष स्यांम है। साचि किया मुषनूर। ३८।
जो मति पीछे उप जै। सो सभि पहिली होइ।
कबहूंन होवै जीव दुषी। दादू सुषिया सोइ। ३९।
आदि अंति चलवे किया। माया ब्रह्म विचार।
इहां क्यां नहांलेषस्या। दादू दे मन वार। ४०।*

* The orthography is left without correction as in the original. The letter ष it must be remembered is to be pronounced *kh* or ख. We have arranged the verses according to their measure and rhyme, in lieu of carrying them on continuously in the native fashion.—Ed.

Translation of the Chapter on Meditation.

Reverence to thee, who art devoid of illusion, adoration of God, obedience to all saints, salutation to those who are pious. To God the first, and the last.

He that knoweth not delusion is my God.

1. DADU hath said, in water there exists air, and in air water; yet are these elements distinct. Meditate, therefore, on the mysterious affinity between God and the soul.

2. Even as ye see your countenance reflected in a mirror, or your shadow in the still water, so, behold RA'M in your minds, because he is with all.

3. If ye look into a mirror, ye see yourselves as ye are, but he in whose mind there is no mirror cannot distinguish evil from good.

4. As the *til* plant contains oil, and the flower sweet odour, as butter is in milk, so is God in every thing.

5. He that formed the mind, made it as it were a temple for himself to dwell in; for God liveth in the mind, and none other but God.

6. Oh! my friend, recognize that being with whom thou art so intimately connected; think not that God is distant, but believe that like thy own shadow, He is ever near thee.

7. The stalk of the lotus cometh from out of water, and yet the lotus separates itself from the water! For why? Because it loves the moon better.

8. So, let your meditations tend to one object, and believe that he who by nature is void of delusion, though not actually the mind, is in the mind of all.

9. To one that truly meditateth, there are millions, who, outwardly only, observe the forms of religion. The world indeed is filled with the latter, but of the former there are very few.

10. The heart which possesseth contentment wanteth for nothing, but that which hath it not, knoweth not what happiness meaneth.

11. If ye would be happy, cast off delusion. Delusion is an evil which ye know to be great, but have not fortitude to abandon.

12. Receive that which is perfect into your hearts, to the exclusion of all besides; abandon all things for the love of God, for this DADU declares is the true devotion.

13. Cast off pride, and become acquainted with that which is devoid of sin. Attach yourselves to RA'M, who is sinless, and suffer the thread of your meditations to be upon him.

14. All have it in their power to take away their own lives, but they cannot release their souls from punishment; for God alone is able to pardon the soul, though few deserve his mercy.

15. Listen to the admonitions of God, and you will care not for hunger nor for thirst; neither for heat, nor cold; ye will be absolved from the imperfections of the flesh.

16. Draw your mind forth, from within, and dedicate it to God; because if ye subdue the imperfections of your flesh, ye will think only of God.

17. If ye call upon God, ye will be able to subdue your imperfections and the evil inclinations of your mind will depart from you ; but they will return to you again when ye cease to call upon him.

18. DADU loved RA'M incessantly ; he partook of his spiritual essence and constantly examined the mirror, which was within him.

19. He subdued the imperfections of the flesh, and overcame all evil inclinations; he crushed every improper desire, wherefore the light of RA'M will shine upon him.

20. He that giveth his body to the world, and rendereth up his soul to its Creator, shall be equally insensible to the sharpness of death, and the misery which is caused by pain.

21. Sit with humility at the foot of God, and rid yourselves of the impurities of your bodies. Be fearless and let no mortal qualities pervade you.

22. From the impurities of the body there is much to fear, because all sins enter into it; therefore let your dwelling be with the fearless and conduct yourselves towards the light of God.

23. For there, neither sword nor poison have power to destroy, and sin cannot enter. Ye will live even as God liveth, and the fire of death will be guarded, as it were with water.

24. He that meditateth will naturally be happy, because he is wise and suffereth not the passions to spread over his mind. He loveth but one God.

25. The greatest wisdom is to prevent your minds from being influenced by bad passions, and, in meditating upon the one God. Afford help also to the poor stranger.

26. If ye are humble ye will be unknown, because it is vanity which impelleth us to boast of our own merits, and which causeth us to exult, in being spoken of by others. Meditate on the words of the holy, that the fever of your body may depart from you.

27. For when ye comprehend the words of the holy, ye will be disentangled from all impurities, and be absorbed in God. If ye flatter yourselves, you will never comprehend.

28. When ye have learned the wisdom of the invisible one, from the mouth of his priests, ye will be disentangled from all impurities ; turn ye round therefore, and examine yourselves well, in the *mirror which crowneth the lotus.

29. Meditate on that particular wisdom, which alone is able to increase in you, the love and worship of God. Purify your minds, retaining only that which is excellent.

30. Meditate on him by whom all things were made. Pandits and Qázis are fools : of what avail are the heaps of books which they have compiled?

31. What does it avail to compile a heap of books? Let your minds freely meditate on the spirit of God, that they may be enlightened regard-

* उरध कवल मैंचरामे is the original.

ing the mystery of his divinity. Wear not away your lives, by studying the vedas.

32. There is fire in water and water in fire, but the ignorant know it not. He is wise that meditateth on God, the beginning and end of all things.

33. Pleasure cannot exist without pain, and pain is always accompanied with pleasure. Meditate on God, the beginning and end, and remember that hereafter, there will be two rewards.

34. In sweet there is bitter, and in bitter there is sweet, although the ignorant know it not. DADU hath meditated on the qualities of God, the eternal.

35. Oh man! ponder well ere thou proceedest to act. Do nothing until thou hast thoroughly sifted thy intentions.

36. Reflect with deliberation on the nature of thy inclinations before thou allowest thyself to be guided by them; acquaint thyself thoroughly with the purity of thy wishes, so that thou mayest become absorbed in God.

37. He that reflecteth first, and afterwards proceedeth to act, is a great man, but he that first acteth, and then considereth is a fool whose countenance is as black as the face of the former is resplendent.

38. He that is guided by deliberation, will never experience sorrow or anxiety: on the contrary he will always be happy.

39. Oh ye who wander in the paths of delusion, turn your minds towards God, who is the beginning and end of all things; endeavour to gain him, nor hesitate to restore your soul, when required, to that abode from whence it emanated.

V.—*History of the Rajas of Orissa, from the reign of Rája Yudhishtira, translated from the Vansávali. By the late* ANDREW STIRLING, *Esq. C. S.*

[The substance of this history is introduced in the translator's "Report on *Orissa Proper* or *Cuttack*," published in the Asiatic Researches, vol. XVI. but the present manuscript (in the lamented author's own hand) is worthy of preservation as the source whence the materials of his excellent memoir were drawn. It is our object to collect all native accounts of the kind in their original state to serve as records and authorities, quantum valeant. We have left the GILCHRISTIAN orthography to save trouble: the scholar can readily transfer the names into the classical form, while the common reader will pronounce them more in the present native fashion, from their actual dress.—ED.]

On the death of rája JUDISHTER the period of the *Kali Juga* obtained complete prevalence. In this jog the actions of men are good in the proportion of $\frac{1}{4}$ and vicious in that of $\frac{3}{4}$. The average stature of man is $3\frac{1}{2}$ cubits.

After the death of this rája (YUDISHTHIRA), rája PURFEKHIT reigned 237 years. In the plenitude of his power and glory this prince perform-

ed the *Aswamedha yuga*; having by accident incurred the displeasure and the curses of a brahmin named TUKSHAKA, he was bit by a snake. The rája, knowing that his end was at hand, had the *Sree Bhagwut Pooran* read to him, and then resigned himself to his fate.

His son JANAMA JAYA ruled 220 years. To revenge the death of his father this rája performed the *Surp avatar* jog and destroyed snakes innumerable. The serpent *Tukshaka* who had bit rája PUREEKHIT, alarmed at this spectacle, betook himself to the heaven of *Indra* to pray for assistance, and was saved through the interference and supplication of that deity. Rája SURSUNKH DEO succeeded and reigned 170 years. This prince caused to be excavated the tank called *Sursunkh*, and founded the temple of SREE DHOLESWAR MAHADEB between the Mahanuddee and the ghat of *Janjpore*, (*Yajapoor*.)

After him rája GOTAMA DEO reigned 175 years and,

Rája SUNCARA DEO reigned 88 years. This latter prince dug numerous wells and tanks of all sizes and descriptions.

Then rája MEHINDER DEO reigned 170 years, rája SERISSU DEO 194 ditto, rája GUNDHUR DEO 175, and rája SETA or SWETA DEO 185.

The latter prince was succeeded by BEER BICKERMAJEET (VICRAMADITYA) who governed the country 130 years. This prince by means of enchantments subjected to his will and authority the DEO named ASHTA BEITAL.

He was succeeded by rája SHUSHANGA DEO whose reign lasted 117 years. After him rája BHOJA reigned 180 years. This was a highly accomplished prince acquainted with all the sciences. Seven hundred and fifty-two poets of celebrity resided at his court. Amongst them by far the most distinguished and accomplished was CALIDASA who composed the poem called the *Maha Natuk*. Rája BHOJ, built fort *Barabuttee*. To him is ascribed the introduction of the use of boats and ships, the invention of wheeled-carriages, ploughs, water-mills and the weaver's loom, and the establishment of the imposts called sayer.

Rája ABHEE MUNNOO DEO succeeded and reigned 125 years. This prince was acquainted with the past, the present, and the future.

Afterwards rája TEEPOO DEO, reigned 135 years. It was this prince who first ordained that four cowries should be called one gunda, twenty gundas a pun, and sixteen pun one kahawun. He invented likewise the measure of weight called the seer.

Then rája BHAM DEO ruled 120 years. He established pecuniary mulcts for particular offences.

Rája AKUTTA or ABUTTA reigned 53 years. This prince was remarkable for and indeed received his name from his eating his food without either cutting or chewing it.

Rája CHUNDA DEO reigned 13 years. Then came the reign of mahárája INDRA DYAMNA, which lasted at two different periods for 333 years. The country of this king was *Malwa*. He built the temple of *Sree Jeoah Pursottem Chutr* with stones quarried from the mountain *Anoola Salee* distant 160 coss from that place, which he brought to the spot loaded on the backs of tortoises. *"After finishing the building he went to the heaven of Brahma to bring down Brahma Jeo to consecrate it. He found Brahma absorbed in the worship of Purmesur. After stating the object of his visit therefore in the most supplicatory manner he determined to wait until Brahma should have leisure to attend to his request on completing his worship of Sree Jeo. In this long interval, a violent irruption of the ocean took place which overwhelmed the temple at *Pursottem Chutr* and covered it entirely with sand so that all traces of it were lost, and the memory of the building passed away from the minds of men.

After this period rája GAL MADHAVA reigned 137 years, this prince beholding a vast plain of sand all around at *Pursottem Chutr* was accustomed to ride over it on horseback in every direction. One day by accident the hoof of his horse struck on the *Neel Chukr* or metal spire of the temple of rája INDRA DYUMNA which sent forth a sound. The rája surprised looked about to ascertain the cause of the noise, and at last discovered the temple. He then began to dig away the sand, and at the end of three years and three months had entirely restored the building to its former state. About this time rája INDRA DYUMNA having persuaded Brahma to accompany him from his heaven arrived at the spot. A furious dispute now arose between the two monarchs both claiming the temple as his own. BRAHMA interfering desired them to contend with words no longer, but to produce evidence to establish their statements, when a proper decision should be passed. Mahárája INDRA DYUMNA then said; "The crow which sits on the kulp bur tree, and the tortoises which brought on their backs the stones used in the building of the temple shall be my witnesses." BRAHMA accordingly went in company with the two rájas to listen to the testimony of the crow. On arriving at the site of the tree, they found the crow (which by some miraculous change had become *Chutoor Bhooj* or four-legged) laying asleep on the surface of the water of the tank called *Rohaee kund.* BRAHMA placing his hand on the back of the bird conjured it to speak and declare who built the great temple close at hand. The crow starting from its sleep cried out "What, BRAHMA, art thou who hast thus awakened me? Even the thousand-faced BRAHMA is not entitled to disturb my rest."

* Literal translation.

Brahma replied "True, but I again conjure thee, say whose temple is this." The crow then answered, "It is rája Indra Dyumna's. It was long buried in sand from an inundation of the sea; rája Gal Madhava cleared away the sand and has restored it to its former condition." The parties then went to the *Indra Dyumna* **Talao* where there were many tortoises, who as soon as they saw Mahárája Indra Dyumna all plunged to the bottom. Brahma asked wherefore they fled, they answered, "Rája Indra Dyumna is come back again. We fear lest he should again load us with stones and pay us for our labour as scurvily as before, seeing that he only gave us a daily allowance of a handful of rice, a gourd, and a little bhunna of the value of about a cowree." Rája Gal Madhava became now overwhelmed with shame and was obliged to acknowledge himself in the wrong. He died shortly after. Then the rája Indra Dyumna having performed a jog placed the Dar Brahm image in the temple with due ceremony. The image of Neel Madhava disappeared from that time. The principal ranee named Mookta Devi founded the temple called the *Mookta Mundup* and ranee Goondicha, another of his wives, built the *Goondicha Mundul*† and established the ruth jatra. At the time of the festival the latter ranee stood before the great ruth of *Jugunnath* which is called *Nundee Ghose* and prayed thus: "Oh divinity, let none of my offspring survive, lest becoming inflated with pride they should lay claim to the merit of having built the temple and say, the image is ours." The same ranee enclosed the temple with four walls, which was called the Meghad enclosure. Her prayers were so well attended to that all the children of rája Indra Dyumna died away and none was left to perpetuate the race.

The sovereigns of the *Kesuree Buns* (or *Vansa*) dynasty then succeeded to the government.

The first of these, Chundra Kesuree ruled 52 years. Then rája Jujjat Kesuree ruled 96 years, Kurung Kesuree 117, and rája Sooruj Kesuree 117 years. The latter rája founded the village of *Gope*. He was succeeded by rája Lullat Kesuree who reigned 113 years. He built the famous temple of *Bhovaneswara*, and his ranee dug the tank called *Bindoo Sagur*. Then rája Busunt Kesuree reigned 95 years, and Pudum Kesuree 59 years. The latter prince

* The famous tank near the *Gondichar Nour*, called vulgarly *Inder Dummun Talao*.

† The *Goondicha Mundul* retains its old name. It is the building to which Jugunnath is taken during the ruth jattra. The great ruth also is still called *Nundi Ghose*.

paid tribute to no one. He built the temple of *Ananta Poorooshoottama Deva Thakoor*, and his ranee established a jatra there in the month of Cheyt.

Rája NIROOPA KESUREE reigned 48 years. This prince committed fornication with the females of the brahmin tribe, as a punishment for which offence the race of the KESUREE BUNS princes became extinct.

The CHOURANG dynasty* next reigned. Rája UDI PATCHOURANG held the reins of government for 90 years. This prince put a stop to the worship of all the gods and goddesses excepting SREE BIRJAEE DAR (at *Janjpore)*, GOTAM CHUNDI DEBEE, and KALIKA DEVEE. He established in *Orissa* the historical record called *Mandula Panjee* †, and also a tax on marriage which proved very oppressive. It occasioned ruin to the family of a particular brahmin and broke his heart: in dying he breathed a sigh before Purmesur jeo which produced the extinction of the *Chourang* race.

The SOORUJ BUNS dynasty‡ then succeeded; rája SOORUJ DEO swayed the sceptre for 78 years. He built *Sarungurh* and established five different "*Kuttuks*"§ or seats of government; the 1st at *Janjpore;* the second at *Amrabuttee;* the third at *Choudwar;* the fourth, at *Chulta*‖; the fifth at *Bunarussee*¶, (the site of the modern *Cuttack.)*

Rája GUNGESWARA DEO succeeded and reigned 92 years. This prince conquered the whole country between the *Ganges* and the *Godavery*, subduing each of the rájas in succession.

Afterwards rája EKABUTTEE KAM DEO reigned 76 years. He was void of all passions and sensual desires, and devoted solely to religion. He never ate without hearing the *Geet Govinda* repeated.

Rája ANNUNG BHEEM DEO, succeeded and reigned 65 years. He rebuilt the temple of *Sree Jevah Porsuttem Chutter* and carried the edifice to a great height. This prince was renowned for his piety and the splendour of his court. He established the worship of the deotas on a proper footing, granted large assignments to brahmins, and appointed sixteen great officers of state called Sawunts for his own service, besides 72 Nigogs (servants of different descriptions),

* Chourang Vansa.

† The historical records of the temple at Jugunnath are called *Mandula Panjee.*

‡ Sooruj Vansa.

§ *Kuttuk* appears to be a Sanskrit word having the signification given in the text.

‖ I am ignorant where this may be.

¶ A village called *Bunarussee* still exists on the extreme point of the island where the *Keetjonee* and *Mahanuddee* separate.

and 36 offices. The titles of Sawunt, Mungraj, Bunjunna, Patsahanee, Chotra, Raee Gooroo, and Purrera* had their origin with this prince. He however put to death a number of brahmins; to expiate which offence he established the three daily Bhogs (offerings of food at the temple of Jugunnath), founded numerous Mundups and dug no less than 84 wells and tanks.

After him rája ATEE DEO reigned 27 years. He built the temple of *Ullah Nath* in the *Ootra Khund* or northern country. It is said that in that temple the sound of the music of the heavenly choristers in the court of INDRA could he heard.

Rája PERTAB BHEEM DEO, reigned 39 years: his principal minister was ACHOOT DAS PURRERA. This prince conquered as far as *Boad* and built the temples of Pursuram Jeo and Hunooman Jeo, at the ghat of *Janjepore*.

Rája PURSOTTEM DEO reigned 27 years. This rája made a vow that he would enjoy the persons of a lac of women. He had got through 60,000 when all his limbs became rotten and dropped to pieces. So he died.

After him rája LANGORA NURSING DEO, reigned 18 years. He built the temple at *Kunaruk*. This prince was renowned for his strength and skill in all athletic exercises. He could break a block of stone with a blow of his fist. Many say too that blood flowed from his eyes continually and that he had a tail like a monkey. His dewan was SHIBAEE SINGH SOONTRA.

Afterward rája BABE BHANOO DEB reigned 22 years. In the reign of this prince rice in the husk sold for K. 1128. P. per bhurrum. In other words a dreadful famine was experienced,—he was poisoned by some of his courtiers.

Rája SALOOKA NURSING DEO reigned 18 years. In this rája's reign also there was a severe scarcity. The necessities of life rose to such a price that thousands perished of hunger, and in their distress even lost all regard for the distinctions of caste†.

Rája KUPIL INDRA DEO reigned 32 years. In his reign darkness prevailed over the earth for seven days together. Rája BHANOO DEB reigned 26 years. It is said of this rája that having on some occasion found a hair in his *Mahapershad*, he punished the *Shewuks* of the temple most severely in consequence. The *Shewuks* complained bitterly before the idol of the treatment they had experienced, and

* All well-known Oorish names in the present day.

† The account adds, MAN SINGH visited *Orissa* in this reign. If this is AKBER'S MAN SINGH there must of course be some error in the statement.

prayed Jugunnath to vindicate their characters. Accordingly Purmesur Jeo appeared in a vision to the rája and said "The hair which you found in the *Mahapershad* was a hair from my head." The following day the rája saw a hair on the head of the image of Sree Sree Maha Prubhoo which he plucked out, when miraculous to relate blood flowed. From that time the Bhog or offering of food called the Bal Bhog was established.

Afterwards rája KUBER NURSING DEO reigned 36 years. In his time lightning struck the temple of PURSARAM THAKOOR and threw down a great part of it. The stones falling into the river formed a new stream called the *Mudagoonee*. In this temple one might hear the sound of heavenly instruments from the swerga regions. The dewan of this rája was a person named BERKOO PAKHEH. His reign was remarkable for witnessing the performance by an individual of the pious ceremony called the *Sak Poshee Narinder*, or the feeding of a thousand persons. The rája farther established the *hat* called the *Sundh hat*, dug the famous tank called *Nurinder Sooruj*, and founded the Chundra jatra of Sree Jeo.

Afterwards rája DHANAVA DEO reigned 26, and rája BULER BHANOO DEO 23 years. The former prince drank wine and committed incest with his daughter, to expiate which crimes he dug the tank called *Kosla gung*. In the reign of this prince paddy sold at two kahawuns per bhurrum; rice at 10 cowrees per seer; cotton at 1 p. 5 g. per seer.

Rája KHERKA NURSING DEO, then reigned 1 year 3 months, and rája PERTAB ROODER DEO 36 years. The latter prince subjected to his dominion the whole country as far as *Setbund Ramesir* (the bridge of *Rama*.)

Rája KHUKAROOA DEO reigned 8 years. He lost his life in playing at the game called humgnoree. With this prince ended the race of *Sooruj Buns* monarchs.

Afterwards came the *Gunga Buns* dynasty*.

The first of these princes rája BEER BHANOO DEO reigned 25 years. The remarkable circumstance of his reign is that he established the Khundaits in the country of *Orissa*. Rája NURSING DEO reigned 39 years. He built the bhog mundup and constructed the shed within the walls of the temple of Sree Jeo called the *Koorome Bedha*. He also introduced the idols called the *Puttia Gumputtee Thakoor* and *Muddun Mohun Thakoor*. With this prince the *Gunga Buns* dynasty ended.

The princes of the *Bhoee Buns* dynasty† succeeded.

* *Gangá Vansa.* † *Bhui Vansa.*

The first of these, rája KUPEL INDER DEO, reigned 40 years. He built the temple of *Kupileswur Mahadeo* and conquered *Bidya Nuggur*.

Afterwards rája PURSOTTEM DEO reigned 30 years. This prince conquered the country of *Kunjee Kavery* and brought the Sut Badee* Thakoor from that place. During his reign a person named RUKUT BAHOV entered *Orissa* and plundered and laid waste the country. The rája at length succeeded in expelling him and pursued him as far as the banks of the *Ganges*.

Rája GOBIND DEO reigned 10 years, a very unjust and oppressive prince. Rája,CHUKA PERTAB DEO reigned 2 years and 15 (days?). In the plenitude of his power and arrogance he ordered the Shewuks of Sree Jeo to bring grass for his horses, who indignant at the requisition, placed a little grass on the singhasun and uttered these complaints which were attended to. The rája shortly after died by poison.

Afterwards rája TOKA RUGGOO DEO, reigned 8 years, 8 months, and PURSOTTEM DEO 18 years. The latter prince was a *Sree Kishen Bhugut* (query? worshipper of Krishna). He built three ruths and performed the Gondicha jatra with them. He established the Busant Oochut Jatra likewise. FUTTEH KHAN† murdered the son of this rája who had been guilty of no offence whatever. When rája PURSOTTEM DEO died, 13 of his ranees burnt with his corpse.

Rája GUNGADHUR DEO reigned 3 years. He was thrown into a cave and perished. Rája BULLUBH DEO then reigned 8 years, 8 months, and rája KUNJULLA NURSING DEO, 17 years. The latter prince was burnt alive.

Then Rája TELINGA MOOKOOND DEO reigned 22 years and 8 months. Whilst this prince was absent with his whole army on a pilgrimage to bathe in the *Ganges*, the well known KALAPAHAR took advantage of the opportunity to make an inroad into *Orissa*. This KALAPAHAR was originally a brahmin, the story of his conversion to Muhammedanism is thus told. The king's daughter‡ became smitten with his person and determined to gratify her passion, she endeavoured to visit him but was deterred from approaching near him by the appearance of his household goddess who shone like a flaming fire. She was then obliged to have recourse to stratagem and contrived with the consent of her father and mother to make him eat flesh and drink wine in consequence of which acts he lost caste, his guardian deity abandoned him, and he became an apostate from his faith. From this period

* *Satya vádin*, truth-speaking.

† Who was FUTTEH KHAN?

‡ Is this the daughter of SOLIMAN GOORGANER king of Bengal at that period, whose general, Kalapahar is so styled in some accounts?

must be dated the subjection of *Orissa* to the Mussulman government. KALAPAHAR pushed straight for *Pooree* with the intention of destroying all the once famous Hindu places of worship. As he entered the place a thick darkness came on which prevailed for several hours. The invader did much injury to the temples of Sree Jeo, cut down the Kulp Bur tree, and even threw the image itself of Purmesur into the fire. It was kept in the flames constantly for seven days but in vain, not a particle of it was even singed. The image was then thrown into the sea from whence it was recovered by a person named SOODAN DAS, who concealed it in the hollow of the instrument called murdung, and placed it with great veneration in a private part of his house. After KALAPAHAR had committed numerous excesses and abominations, a swarm of bees issued from the temple of *Bhovaneswar*, attacked him with their stings and drove him frantic with rage and pain out of the country.

Afterwards rája RAM CHUNDER DEO succeeded to the throne and reigned 38 years and 4 months*. This prince re-established the Dar Brahm image in the dewul of Sree Jeo. He was summoned to *Nirmulla* by rája MAN SINGH on the part of the emperor AKBER who conferred on him a Khelaat. The *mouzahs Ramchunderpore, Beer Ramchunderpore, Bijye Ramchunderpore,* and *Abhee Mokhree Ramchunderpore,* were founded and peopled by this prince.

Rája PURSOTTEM DEO reigned 22 years. He founded *Pursottempore,* and *Beer Pursottempore.*

Rája NURSING DEO succeeded and reigned 26 years. He founded the *Nursingpore Sasun* and dug a large tank there. A person named DEB PUHRAJ a brahmin, who had received some injury from the rája, went secretly to the Moghuls and gave information of his proceedings. He brought back with him a party of Moghul troops who fell upon the rája whilst he was employed in consecrating the tank, and put him to death after a sharp contest with his troops. Before this event the rája had conquered *Gurh* Ram Mundee.

Rája BULBHUDDER DEO reigned 39 years. He founded the Bulbhudderpore Sasun. This rája conquered and subjected to his authority numerous *Gurhs* and *Killahs.*

Afterwards MOKOOND DEO rája reigned 34 years, and 4 months. He taking with him KUNWULA DEI, PAT MAHADEI ranee conquered the whole country to the banks of the Ganges. He built a *Nour* or

* From this time of course the reigns of the Ooriah rajas are merely nominal, as the Moguls took possession of the whole country excepting the hilly regions, *Khunda Pooree* and the 4 pergunnahs, *Sunbaee, Rahung, Seraeen* and *Choubeescood.*

palace at *Betpore* and in the 37th Auk went to bathe in the Gundukee river. He married the daughter of BANDHOO BAHAR SINGH. He came from *Budree Narain* on the boat called a champ, to the Nil Kundur that is Pursottem chutter, where he worshipped Jugunnath Jeo and founded the Mukoond Bullubh Bhog. He died of the small-pox at *Jaujpore*.

Rája DIRB SINGH DEO reigned 27 years and 8 months. In the 7th Auk the gates of the temple of Jugunnath closed suddenly. Afterwards in the 21st Auk a person named JYE JEE RAMA came with a party of 350 people and opened them. Rája DIRB SINGH DEO killed the KHUNDAIT of *Burung* and took possession of his country. He conquered also *Banpore* and built a palace at *Rutheepore* in *Khoonda*. He died in the 34th Auk* at *Ponee*.

HURIRIKISSEN DEO succeeded and reigned 40 years. This rája made a quantity of chunam by burning cowries and whitewashed about one half of the great temple of Sree Jeo.

Afterwards rája GOPINATH reigned seven years and 2 months.

Rája RAMCHUNDER DEO reigned 12 years. He was renowned for his strength and skill in athletic exercises. This prince was entrapped by MOHUMMED TUKEE (the Mussulman Soobedar) who put him in confinement, killed his dewan BUMOO BHOWURBUR, and exercised authority in his country for some time. He afterwards escaped through the intervention of SREE JEO, and recovered possession of his country but was killed in a contest with the Mussulmans.

He was succeeded by rája BEER KISSORE DEO who reigned 44 years. In the 2nd Auk, PUDLABH DEO of Puttier aspired to the rajgee, and gained possession of it for a short time, but was betrayed by rája BEER KIPNE DEO's people, who pretended to espouse his cause, and put to death. In the 17th Auk the Marhattas laid waste Khinda and took possession of the pergunnahs with Pursottem Chutter eli; in the 23rd Auk NARIAN DEO came into *Orissa* and claimed the rajgee. The rája's dewan was sent to the Marhattas to beg assistance, who dispatched a force to his aid on his agreeing to mortgage the pergunnahs *Seraeem* and *Simbaee*. NARAIN DEO was accordingly driven out and BEER-KISSORE DEO then took up his abode at *Banpore*. The rája was now seized with a desire to learn the enchantment called the *Ashta Bietul Deo*, and whilst studying intently the requisite incantations he lost his reason. He was then plundered by his bukshee DAMOODUR BHOWURBUR who took him into *Cuttack* to the rája RAM Pundit by whom he was confined and his grandson DIRB SINGH DEO installed

* Perhaps a contraction of *abhishék*, the year of his reign.

in the rajgee. In rája BEER KISHORE DEO's time two dreadful famines were experienced*.

Rája DIRB SINGH DEO reigned 18 years. He was an excellent and virtuous prince. He paid a regular peshcush and built the nour at Khonda Gurh. Rája MUKOOND DEO reigned after him 20 years. In the 9th Auk the Feringees entered *Cuttack* and acquired the province of *Orissa*.

VI.—*Some account of the valley of Kashmír, Ghazni, and Kábul; in a letter from* G. J. VIGNE, *Esq. dated Bunderpore, on the Wuler lake, Kashmír, June* 16, 1837†.

My conscience smites me for not having according to your request sent you a word or two on the αστεα και νοον ανδρων of the countries which I have lately visited. I have to request you in perusing the following observations, to bear in mind that they are chiefly from memory, as my notes are at *Loodiana*, and that had I intended, when I quitted England, to visit these regions of past, present, poetical, and coming interest, I should have been better prepared both with information and instruments for scientific research.

Before speaking in detail of the natural curiosities of *Kashmír*, it must be remarked that by far the greatest is the valley itself. To say nothing of its verdant lawns, its innumerable streams and the dense deodar and fir forests on its southern side; it cannot I imagine be contemplated as a rocky basin or cradle, without admiration of its size, and its unrivalled proportions of height to distance. By the *Poonah* road it is 160 miles marching from *Bunber* to *Baramula* very severe in places. By the *Rajawur* road somewhat *less to Shupeony*. Its greatest length is 75 or 80 miles. Its greatest breadth does not exceed 24° 13½ miles by actual survey in a straight line from the hill of *Skupton* to that of *Islamabad*. Its smallest width is about 14 miles. The height of the peaks of the *Pir Punjal* will be found I think, when actually taken, to be at about 16,000 feet. *Abramukha* on the north side of the valley is higher; and is so consi-

* All these are well known occurrences in the modern history of the province.

† We are much obliged to Mr. VIGNE for this interesting account of some of the countries he has lately made his home. We have left his notes as they stand, bespeaking some indulgence from his readers for the want of strict arrangement in a hasty epistle,—but a much larger share for the blunders we have doubtless committed in many of the names; for besides the difficulties of a crossed and interlined manuscript in no very legible hand, the letter reached us soaked through and nearly obliterated by a journey of 1,500 miles in the rains. We were forced to recopy the whole before the compositors could undertake it.—ED.

dered by the natives. A curious belief is current with them that no poisonous snake exists within view of its summit.

Nangá Parbat or *Diarmal* as the Tibetans call it, is one of the noblest peaks I ever saw. It will be found to be 18,000 or 19,000 feet in my humble judgment. It rises near *Assor* or *Astor*, about half way and on the left of the path to *Little Tibet*, and is usually concealed in the clouds when the other mountains are uncovered.

There are two other peaks of vast height named *Nanou* and *Kanou* between *Kashmír* and *Ladák*, near the village of *Marchwerwand*. Baron HUGEL saw them from the *Pir Punjal:* I was not so fortunate in my weather.

There are a dozen passes which are called highways, that are often used: and 500 places by which an active mountaineer could pass in and out of the valley.

The *Pir Punjal* pass and others on the south side are about 12,500 feet high. *Poonah*, which is the only one, excepting that of the valley of the *Jelum* to *Baramula*, that is open all the year for horse and foot, is only 8,700 feet by the boiling point.

Of the two passes to the north, that by *Derans* to *Ladák* on the right and *Iskardo* on the left is open all the year for foot. The way to *Iskardo* by *Deosea* or *Deoseh* is said not yet to be practicable for horses. I am waiting here for a day or two in consequence.

The source of the *Jelum* is 10 miles or more beyond *Veraag*. I have visited it; my thermometer gave me to the best of my recollection between 9 and 10,000 feet. It is very singular that its source should not be adorned with a single Hindu monument when there is hardly a large spring without one. The *Jelum* above *Islámábád* is called the *Sandren;* thence to *Baramula* it is known only by the name of the *Vet* or *Wet*, or *Beyah;* thence in the pass it retains with the Hindus its Sanskrit name the *Vetasta:* the natives simply call it *Deriah* "the river." It winds 36 times in its course between *Islámábád* and *Baramula* and forms 16 islands. In *Kashmír* it is one of the most tranquil rivers I ever saw; its rush in the spring through some parts of the *Baramula* pass is terrific. It is a miniature of the rapids above Niagara.

Lakes.—There are 17 in the plain and mountain together, the largest is the *Wuler* on whose banks I am now writing. I measured it yesterday. It no where exceeds 13 miles across. *Tauk* is the only island, 4 miles from *Baramula*, containing about 2 acres. It is said that a city stood where the lake now is, and that the ruins visible beneath the water were collected and formed into an island. There is a Hindu ruin on it and a musjid built by *Bud shah:* it is said there are ruins all around it. I struck my foot against a stone whilst swimming there at

several yards from the shore. There is no mountain stream of any size that pours its waters into this lake. The *Singara* is collected here in great quantities. The *Jelum* flows along its south-western edge; it is fed by landsprings bubbling to the surface here and there, and is very shallow generally. The city lake is fed by two streams; that on which the *Shalumar* is built and the *Tail Bal*, a deep and full river 20 yards in width, which flows from the glacier behind the *Shalumar* 9,000 feet in height. The greatest width of this lake does not exceed 2½ miles. The lotus flower is abundant; and more than 50 different species of plants are in bloom during four months in and near the water. The *Shalumar* is of polished black block marble, 24 yards square, with a colonnade north-east and south-west: ornaments copied from the Hindus. The lake has two islands and a causeway. One is the *Chehar Chenar* (isle of *Chenar*) or *Rupa Lauk* and the other *Sona Lauk* from the buildings that were on them. On the latter island was a four-walled building used by the *Patáns* as a starving prison. There are perhaps 1,000 floating gardens that would be taken for beds of reeds till they are looked into and the melons are seen: 50 yards by 3 is the usual size, and each garden is sold for a rupee or two.

Seven kinds of flat-bottomed boats are used in *Kashmír* of the dingee shape. They are propelled by paddles of deodar of 500 or 1,000 *kirwahs* each; and are used for bringing rice to the city.

When the river rises, the floodgates shut of themselves; and prevent the lake from damaging the country. This lake also is very shallow.

Between the *Takht* is *Salwa* 800 feet high; and the fort on *Hari Parbat* (350 feet) distant somewhat more than two miles apart, the city lies on the edge of this lake, which is extended to the foot of the mountains.

As to the question of the valley having been drained, I am unwilling to hazard a decided opinion till I have talked over the matter with some experienced geologist. My impression is however that it has been, from a height of about 200 feet above the level of *Baramula*. I conceive that the soil and huge rounded granitic boulders overhanging the bed of the *Jelum* in the *Baramula* pass, were formed before the river had found its way out of the valley, and that it has gradually worn its course over and through them. At *Ourí* one long day from *Baramula*, there is a rocky barrier drawn across the pass now divided by the river, which must from its height, at least I think so, have kept the bottom of the valley flooded for ages. Subsequently there must have been a noble cataract there and at present *Ourí* is a sort of Kash-

mírian Thermopylæ in its way, which a good engineer and a very inferior force could soon render almost impregnable.

There are many such smaller valleys running from *Kashmír*, but *Báramula* happens to be the lowest, and the river of course chose that for its outlet.

The *Cosa Nagh* is a large lake lying in the gorges of the *Pir Panjal* several miles in length; but I have not yet visited it though I much wish to do so, and have been to the neighbourhood on purpose. Its surface is not far below the limit of the forest.

The *Gangá* is a lake a good long day's journey up the mountain of *Haraunk*. To this water the Hindus make their pilgrimages with the bones of their relations. *Hakritsir*, *Pamritsir*, and others are all connected with each other and with the river by canals artificial or natural.

Mahés Bal is a very pretty lake half way between the city and the *Wuler*; it is said to be much deeper than the others. *Verney* is the largest spring. *Loka Nagh* is said to be the finest water. There are nine sulphur springs, one chalybeate, two or three warm springs that I found in the pergunnah of *Lolab*, (the most retired spot conceivable, being a valley within a valley at the west end of *Kashmír*) and one that ebbs and flows, in this month only, at the east end. Also two iron and one lead mine worked only for the supply of *Kashmír*.

Gul nang, which I have just visited is a verdant plain 2,000 feet above the valley; nothing was wanting but a herd of deer to make it resemble an English park.

Baba Pamrishi; the *Zeárat* at its foot is the only Mussulman convent I know of. There are no women in the village: 200 or 300 is the number of the community with a Pir or Father at their head. They have lands of their own and are very hospitable. I was awakened here by a severe shock of an earthquake that made the house vibrate.

Chirar or Shah Nur-ud-din left his name to the most holy *Zeárat* in the valley because the holy man was a Kashmírian by birth.

There are not less than 40 Hindu temples in the country of *Kashmír* and 30 in the city, usually in ruins of large stones. The largest is the *Pándaú Khorou* at *Máthan* near *Islámabád*, built by the brothers *Pándau* in their wanderings, a magnificent ruin formerly much higher than at present. It has, and most of them had, a colonnade around them: the capitals are of this shape, (see fig. 1. Pl. XXXVII.) the shaft not long enough for its size; usually the centre building of this shape, (see fig. 2. Pl. XXXVII.) but none are now perfect; there is one

standing near the city, very curious, being built in the water with ornaments of the *kawal* flower (lotus). Inscriptions are few: I have found but one which I enclose*. I have traversed *Kashmír* with WILSON's treatise, and gone over the names with the most learned pandits there, but could not get much information from them beyond the identity of many names and places which was very interesting. A great part of the wall that lines the river in the city, is built (for a mile and a half) of stones taken from Hindu ruins: some of them are of immense size. One at *Mathan* and another at *Patan* is of 9 feet in length and of proportionate width and depth. The figures in relief are usually of *Kheobuwani* the Kashmerian name of *Párbati*. Their temples, with the exception of one in the *Báramula Pass*, which is of white granite cut from some vast blocks that have rolled down near it, (the blocks themselves being also chiselled by way of ornament,) are all of a bluish gray secondary limestone, so soft and fine as to resemble almost Roman *travertino*. I have never been able to find out the exact spot whence any of these have been cut.

I have not been fortunate enough to find any fossil remains in the valley between the *Pooneh* and *Bunker*; in the sandstone cliff I found the end of a huge thigh-bone, (a fossil,) now in Captain WADE's possession. I also discovered a bed of coal near *Rájawer*. The old Sanskrit *Kashmíri* name of the town of *Bij Beari* is *Vijaya Shur*, as I am told.

The river in the city is about 80 yards in width and runs rapidly there only. It is crossed by six bridges of stones and *deodár* trunks. The *Shakar ghar* is a miserable looking place. *Hari parbat* (on which the fort stands), commands the city and could be very strongly fortified. The inhabitants of *Kashmír* are about 180,000 in number. Four seer of rice is bought for one anna in consequence; the thinned population is the cause of this cheapness. *Kashmír* is liable to two destructive visitations, one by snow falling on the mountains in September which chills the air and damages the rice in flower; the other by the overflowing of the river which could be prevented if the dams were restored with the same solidity that they could boast of in the time of the *Chyattar*. A lakh and a half worth of damage was done last year by the floods. It is not the maharája's fault but of those under him. He told me that he had allowed two lakhs of rupees to be laid out on the *Shakar ghar*. I am quite sure that 2000 rupees would be nearer the mark; the rest has been appropriated by the different governors. An unfortunate Zemindar who sows 51 *Kawah*

* See Plate XXXVI. fig. 6.

of rice, and reaps 5,500 per cent. has to give two-fifths to the maharája; but there are 6 or 7 official harpies in the district who reduce his share to one-fifth.

The climate of *Kashmír* is excellent except in the rice fields in the hot weather. It has much altered within a few years. At *Sháhbad* there used to be ten yards depth of snow; now two or three only. The thermometer now at noon stands about the summer heat of England: toward the end of July it will rise to 95, but after that the weather soon gets cooler.

There are different kinds of rice but none very good. The saffron grounds extend for six or seven miles from *Samprí* to *Wintipur* nearly. A proportion is carried to *Yarkand*. Its price in *Kashmír* is twenty rupees a seer. Wheat returns 4,000 per cent., barley 2,500, &c. It is used for no purpose but cookery, and the Hindu sectarial mark.

Ganhar, the *bátú* of the hills is grown but is not much used for bread. Of *salgam* or turnips, there are two crops in the year; but of nothing else. Farming is not good: the harrow is unknown, the clods are broken with a kind of mallet. Of 100 persons, eighty eat oil (instead of ghee) of rape, walnut and *kanjíd*, or sesame and linseed, of which there is a great deal grown only for its oil. No cultivated indigo; poppies are sown for their seed, which is eaten: but they produce no opium.

The villages in *Kashmír* have been the very picture of all that is snug and rural, united. There is invariably a clear rattling stream: (well water is unknown, and what there is, is generally brackish;) two or more huge *chinárs* and a proportion of flowers and fruit-trees. The *chinár* grows from seed but does not attain its gigantic size unless transplanted. "The palms of *Báramula*" exist but in the poets' imagination; there are none in the valley, nor mangoes, nor orange trees. Those places on which the rays of the morning sun first break are well covered with *jangal*; the whole of the south side of the valley for instance; while the north side, which from the height of the mountain range is kept a long time in shadow, is comparatively destitute of trees, but plentifully covered with grass. The same remark applies to the fruit, which is much better on the south side. Snakes likewise are unknown, I am told, except on those parts that are shone upon by the evening sun. There are fire-places and chimneys in most of the better houses, which are of two, three, or four stories of brick and wood, with pointed roofs and open gable ends, the windows of very elegant lattice work, papered in cold weather. The birch bark is spread over a frame work of poplar stems; on this

is strewed a fine cake of earth with grass seed; and the rain cannot penetrate.

The shawl *dukáns* or looms in all *Kashmír* are in number about 3,000 or a few more. Two or three men are employed at each. A large and rich pair of shawls (2,500 rupees) occupies fifteen men for eight months. The wool is brought first from *Jautan* or *Chautan*, thence to *Rudák*, fifteen days; thence to *Ladák* fifteen more: it is carried on the back of mountain sheep. Poor HENDERSON would have told you more of this had he lived. His enterprize led him without any comforts about him to the foot of the *Karakharam* mountains, and he is the first European who has ascertained the course of the Indus, from a distance of eight days' march to the north of *Ladák*. I have no time here to relate the processes it undergoes, beyond that the thread when dyed is dipped in rice water to strengthen it for the weaver. It then becomes necessary to *soften the shawl*. This is done at one particular spot near the city. The shawls are washed with bruised *kritz*, the root of a parasitical plant. Soap is only added for the white shawls. I have sent specimens of this root and of the soil at the washing place to Mr. EDGEWORTH of *Amballa*.

The shawls altogether have never been better than at present, in the time of the *Patans:* and SHAH TIMUR himself has told me that a fine shawl would pass through a finger ring; but he spoke of those that were neither worked nor colored. Now the patterns are constantly changing, and the shawls are very rich and massy. I inspected their colours, of which they have forty shades. But lac and cochineal has been known only for thirty years, and I was much amused and surprized by finding that the dyer extracted a fine green from English sixpenny green baize, and that green and fine blues were much wanted. My informant almost went on his knees to me for some prussian blue! They will make the *pashmína* to any pattern or of any material you choose, otherwise silk is very little worked.

A word on the natural history of the valley. I have seen but six or seven different kinds of fish. Bears are numerous and very large. Musk-deer plentiful in the southern forests. The *Chikor* or red-legged Himálayan partridges plentiful near the hills; but as a sportsman I can hardly believe my eyes and ears when asserting that I have never seen a hare in any part of *Kashmír*, although the ground is the most likely imaginable. I do not say there are none; but every one tells me so. I saw yesterday in the jangal a young woodcock.—I am sure of it. None of the foxes of this place have the black or grey mark*..... Wild ducks are in immense numbers in the winter; they

* This part of the MS. is so completely effaced by wet on the road that it is

come from *Yarkand*. Six kinds of snakes, one kind only poisonous. I do not think it is the *cobra*, but have not seen it. Four kinds of water-shells, one very large snail. The butterflies, about fifty varieties, I am told, confine themselves to the hills chiefly.

I must not forget the burning ground in *Kamráj* the west end of the valley, one beautiful confusion of orchards and fig trees. In the space of an acre the ground is burned (calcined) in three places; no flame is visible, neither any smell. The pandits assemble and cook rice in the heat, and this phenomenon occurs every fourteen or fifteen years on an average; height 7,800 feet.

I believe the whole slope of mountains rising from the valley is of schist and secondary limestone up to the height of 12,000 feet. Above that I imagine that the rock will be found to be of granite; I cannot judge so well of the *Pir Panjal* which I have not examined, as of the mountains of equal and greater height on the north of *Kashmír*. *Deosí* for instance is one mass of white granite. Gypsum and slate are found at *Báramula*.

I have made a good collection of plants and flowers which I have forwarded to Mr. EDGEWORTH. I have seen the "*prangus*" plant The foot-rot in sheep is cured by an infusion of peach leaves. Walnuts and honey are eaten together and not so bad a mixture either. Slips of yew bark are used instead of tea, and the decoction is drank as freely. The *Bultís* of *Ladák* carry a great deal of yew from *Kashmír* for this purpose. Roses of every color are seen in full bloom everywhere. The burial grounds are invariably covered with the iris of three or four different colors. It is always planted on a new tomb in the idea that it prevents the access of water.

As to coins I am sure there are very few in *Kashmír*; I have searched every where and gone from shop to shop myself: many copper coins came in my way, none good with the exception of two or three, one of which I send.

Eskado or Iskardo.

The "*Khars*" or valleys about *Simla* and *Missouri* give no idea of the face of these countries. Instead of the long slope divided from another by what may be called, comparatively with their extent, a ditch, we have a vast surface of table-land bare and studded with peaks, and at its extremity, as at *Iskardo*, a deep rocky punch-bowl.—*Gureiss*, the *Urasa* of WILSON, three days' march from *Kashmír* is a valley of this description; next comes the table-land of *Deosa*, and then *Iskardo* one degree to the north of *Kashmír*. The streams produce gold, but

impossible to make it out. We are therefore compelled to omit some further zoological notes.—ED.

the natural verdure of these countries has all flown to *Kashmír*. *Iskardo*, resembling *Gibraltar* more than any place I ever saw, somewhat higher, if I remember rightly, with one mural side and the others nearly inaccessible, washed moreover on two sides by the Attok, could not but tempt me to believe it to be the rock of *Aornos*, particularly as the time mentioned for the march thence to *Attok* (fifteen days) did not tend to weaken my opinion, to which the account of QUINTUS CURTIUS is favorable. But ARRIAN, whom I have since seen, says nothing of its being washed by the *Indus*, and I give up for the present my idea of its identity. One kind of defence is a large long log, or axle between two wheels, which is rolled down upon the besiegers.

In the *Nádir-námeh* you will find (I forget the story exactly), that NA'DIR's Lieutenant after taking *Bajoun (Bagira)* pursued the people of the country, who had all taken refuge in the mountains of *Tera* so high that "the bird of opinion or idea cannot fly to the top:" he sat below it for several days with 3,000 horse but could not take it. Its river deep and rapid, as I understand, joins the *Attok* somewhere near *Deeobund*. *Tera*, or *Dyr*, or *Tyr* is eleven days up this river. Thence to *Attok* two days are quite sufficient. There is "*Bisseárábád*" on the rock and water. *Every thing* seems to point to this as *Aornos*. The river by the information which QUINTUS CURTIUS received might easily be taken for the real *Indus* and the only remaining hearsay evidence which I wish for, is the fact of there being sufficient timber on its banks for ALEXANDER to construct a raft. *Aornos* seems to have been the name usually given by the Greeks to any inaccessible rocks. It could hardly, from the spelling, be a corruption from ακρο κερανυος (?) though from the sound it might well be so. But I shall see my friend AHMED SHA'H again in a few days I hope, and he will give me every assistance; not being in the worse spirits for an apprehended invasion on the part of the Sikh Colonel here, and rája GULA'B SINGH on the other side having been just checked by the order of the mahárája at the instigation of Captain WADE. He well deserved this interference. I hope also, and in reason, to reach the leftmost source of the *Indus*. The game of *Choughan* mentioned by BABER is still played everywhere in *Tibet*; it is nothing but "hockey" on horseback and is excellent fun. The *Yák* is not found in the vale of *Iskardo*, a partridge as large as a henturkey, the *kubk derri* of *Persia*, I believe, is found in the mountains of *Tibet*.

Lohánis, &c. mentioned by BABER.

Those who wish to march through the *Sulimáni* mountains with the *Lohánis* should not be later than the 1st of May at *Derabuna* near *Dera*

Ismáel Khán. After a very harassing fortnight's march, no sleep in the day from the heat, no sleep at night from the firing and hallooing of the guards, half killed by the weather and poisoned by the bad water procurable only by scraping away the earth, I arrived at *Ghazni*. The greatest height of this mountain pass is nearly 8,000 feet, but the ascent very gradual. The snowy mountains near *Ghazni* come in sight at the top of this hill. *Khorásán!* was the cry amongst the *Lohánis* men, women, and children; they call it *Khorásán* directly these ranges are passed. A consul at *Mittencote* with liberty to trade is, as Mr. MASSON says, all that is necessary to entice the trade up the *Indus*. The Vizeri mountaineers are a hardy and desperate set without a chief with whom could be made an agreement. For days there is nothing but the barren mountain, with here and there a melancholy looking *Lohání* burying-place, studded with the horns of the *Mouflon*, the *Ibex*, and the *Markhun*: hardly a blade of grass is seen and no dwelling. Bloody feuds are constant. These mountains, on the confines of the range at least, are one mass of hardened shingle. The first day's halt the ground is covered with small sea-shells in remnants, and on the third or fourth there was a very fine looking marl and sand cliff in which shells were found, but the heat was so intense I could not visit it.

Ghazni is in a fine situation at the end of a gypsum hill; its mud towers are just numerous enough to be in the way of each other but it cannot be made very strong, as it is commanded. The minars of MAHMUD are beautiful specimens of brickwork with cufic inscriptions; about 140 feet high (from memory). The *Rozeh-i-sultan* or MAHMUD'S tomb is in shape a triangular prism of gypsum with cufic inscriptions. The sandal-wood gates are now scentless and the carving defaced by age. I went out of the regular road to *Kábul* with a servant of the Nawáb JABÁR KHÁN as cicerone. The whole country seems full of copper and iron; lapis lazuli is not rare. I shall never forget the change from India to "*Khorásán*:" it was Persia all over, the cool air perfumed with thyme and gumcestus, long *kanáts* or covered water-ways, the mud castles, the large pigeon grouse, the mulberry trees, and walled gardens, the willow, the *sanjid* and the English magpie, contrasted to give the country a very different aspect from that of the *Panjáb* side of the mountains.

Ghazni is very high, 7,000 feet. The snow reaches to *Simlabora* about one-third of the way from *Ghazni* to the *Panjáb*. The country is irrigated chiefly from the *Band i sultán*, a large dam built by MAHMUD at the top of the plain. It is a noble work but I was rather disappointed after all I had heard of it. It would be very desirable if the

mountains in the direct line from *Ghazni* to the *Panjáb* could be explored. From all I have heard the passes are very open. A great deal of iron is manufactured in those districts, particularly at *Karegram* or *Kanegoram*.

Kábul is colder all the year round than *Kashmír*; its latitude is a little more northerly. An irregular circle of mountains, twenty miles in diameter, with numerous passes surrounds an irrigated plain: across this plain runs another chain 500 to 1,500 feet in height: *Kábul* is built near a gap in this chain. The hills are universally barren and of primitive rock generally. Those at *Kábul* are all of gneiss. There is not at a little distance one blade of grass apparent upon them. The *nuwash* grows, and the "*asal sús*" or liquorice is found upon them. Its gardens are crammed with delicious fruits, but the very commonest flowers are entirely artificial.

I was much disappointed in the country; there is not literally one single tree that has not been planted. But altogether its appearance is rich and beautiful. The city is universally of mud and sun-dried brick. In 60 years there would hardly be a vestige of *Kábul* if the inhabitants left. The *Bala Hissar* of rough hewn stone, a few wells, and the elegant mosque of white marble at BABER'S tomb are exceptions.

The *Kohistán*, as it is called, under the *Hindu Kosh*, 30 miles from *Kábul*, affords an exquisite landscape.

The "*Reg rewan*," or running sand of BABER (as is in fact every thing he notices, as in his day) is there visible at a great distance, but there was no approaching it, such was the lawless state of the country. MUHAMAD AKBER KHA'N, the Amír's son, has since reduced them to subjection. It was tantalizing to look at a district so fair in aspect, rich in ruins, coins and antiquities, as I believe it to be, and not to be able to explore it. The plain of *Beghrám* was close on our right: Mr. MASSON was with me. The circumference is not less than 15 or 20 miles.

The copper coins are very numerous; I have a large bagful:—two, one of gold and another of silver (a Bactrian)—new. The meritorious researches of Mr. MASSON have opened a mine of antiquities in these countries. I may remark (but with deference) that I do not think *Beghrám* to have been the city founded by ALEXANDER on this side of the *Paropamisus*. I have had no library to consult, but I do not think that he passed into *Turkestán* by this road over the *Hindu Kosh* although he most likely returned by it. There must have been a town there, or in the neighbourhood as long as there was a pass and people to cross over it. ARRIAN'S account is very unconnected and compels us to

resort to minor authorities. By what he alone says there is no reason to infer that ALEXANDER came as far eastward even as *Kandahar*. He says he founded a city at the foot of the *Paropamisus*,—an isolated fact; but by the rest of his narrative we shoud conclude that he went straight from *Mazendarán* to *Bactria*, keeping to the north. But as the nature of the country is not favorable for the march of an army, he probably passed to *Herát*, and founded his city at the foot of the *Hazáraját*, and crossed from that neighbourhood into *Bactria*, perhaps retracing his steps a little. I do not think he came to *Kábul*. From the foot of the pass over the Kosh, an open plain extends due east by which he could avoid all the defiles of *Kábul*, and from the accounts of his subsequent operations, I think it may be fairly inferred that he took this route. *Bámián* I am very sorry to say I could not visit. The country was almost in a state of rebellion, and the good Nawáb JABAR KHÁN would not hear of it. RUSTAM's well, into which he was thrown after being murdered, is about fourteen miles from *Kábul*. I may remark in favor of DOST MAHOMED, that in SHÁH JEHAN's time a person could not go ten miles from the city without risk of robbery. The roads are now every where comparatively safe.

There is a cataract on the *Kábul* river about twenty miles from the city in the mountains that prevents water communication from *Kábul* itself to the sea.

The *Hazarehs* are an interesting people resembling the *Gurkhas* in feature but larger in person. They will ride their horses at speed down very steep declivities, are regular mountaineers in their habits, have a *Yodeln* like the Swiss. Amongst other animals which inhabit the mountains is the *Markhar* or snake-eater, which has never I believe been described. It is a huge wild goat as large as a large pony with an immense whitish beard and straight spiral horns, four feet long nearly. I have two pair of these horns. I have a drawing of a large male that was sent in to me by the young Amir MAHAMMED AKBER KHÁN.

VII.—*Account of an Inscription found by* Mr. H. S. BOULDERSON, *in the neighbourhood of Bareilly. By* JAMES PRINSEP, *Sec., &c.*

To their associate Colonel STACY the Society is more immediately indebted for bringing to their notice the subject of the present article, an inscription hitherto undescribed though it appears to have been known for several years to Mr. H. S. BOULDERSON, of the Civil Service. Having applied to that gentleman for any notes he might possess on its discovery, he has favored me with the following particulars.

"The inscription which Colonel STACY has sent you was taken in 1829 or 1830 from a stone dug up near a village called *Illahabas*, about 15 miles N. E. from *Beesulpoor (Visalapur)* in the *Bareilly* district. It was found with some images in the year 1826 or 1827, in land forming a ridge (about from 15 to 30 feet elevation) above the level of the plain. The ridge commences from the hills N. and E. of *Pillibheet*, runs down the eastern border of the *Bareilly* district, and is continued I believe to near the banks of the *Sardah* or *Gogra* river, in the *Sháhjehánpur* district This ridge is covered with forest and brushwood, and extends eastward perhaps to near the *Sardah*. This tract is I believe nearly if not quite uninhabited; want of water is I think the cause. All about the part where the stone was found there are remnants of large bricks, of the kind found by Captain CAUTLEY at *Behat* on the canal in the *Seháranpúr* district. I do not recollect any ruins, either of an old or more modern description at all near the place. *Illahabas* and the other villages for miles are mostly '*nowabad*' or new settled villages; they are all in the lowland, beneath the ridge. *Beesulpoor* itself is a town of modern date, still mostly chopper and mud. The images were set up by some brahmins in a temple built for the purpose at *Illahabas*, and being novelties for some time attracted considerable offerings: about 2,000 rupees were the produce of one year. This occasioned a claim in the shape of a boundary dispute touching the land on which the temple was built. I had to settle it, and then had the copy of the inscription taken: no one there could read it. The stone from which it was taken was either built in over the doorway of the temple, or was standing by the door; I do not recollect which. Of the images I either took no notice or do not now remember any thing. The copy of the inscription was laid by and forgotten, till Colonel STACY talking about inscriptions I looked out for it and gave it him. The people about the place said that there had been in former times a large city or town there. The bricks, &c. might have created the tradition. The forest now covers the place. There are no remains of ruins new or old from which the stone could have been taken throughout the pergunnah for miles round. The soil of the ridge and that of the land below it are remarkably distinct."

Colonel STACY's pandit has furnished a modern version of the inscription, but, on comparing it, so many deviations were found that I preferred going through the whole with KAMALA'KA'NTA pandit, and I may safely say that the transcript now given is hardly doubtful in a single letter; it is no small compliment to Mr. BOULDERSON's transcriber that in but one place is a letter omitted, and in one only a letter in excess added.

केलदुःसृगग्पीडारुरवमरुचलोलंगसस्फूरद्धरुग्ग्रु
रुरतिर्यग्ग्रलितमडिरुग्णामग्रुलेरुग्गिराजेरनक्कोलोरु
रुलोकवित्रय कृतमदास्रोतमस्रुवतारः पाया द्वः या
धतशिः शमितरुशशिरः शौर्यवीर्यावलेपः रुशूल क्षत
स्थिरयारुवकुंरुमुक्तमुक्तकलायकलितामलकल्प
कांतिः रविशूयुकातुरिरिजावरुगव्कृतचरुयगी
तपरिवेसमिवोद्वहन्नीरालक्ष्मीविरुमकेलिसद्मसुरू

Alphabet of the KUṬILA Character.

कखगघङ	चछजझञ	टठडढण	तथदधन	पफबभम	यरलवशषसहळक्ष
k kh g gh ṅg	*ch chh j jh ñj*	*ṭ ṭh ḍ ḍh ṇ*	*t th d dh n*	*p ph b bh m*	*y Date r l v ś ṣ s h ḷ x*

अ आ ं ? ऊ ? ए ? Date मम्बआमदेम १०४९ मा
a ā i ī u ū e ai

Transcribed by Prinsep Lith.

KAMALA'KA'NTA asserts that the language and poetry of this inscription is superior to any thing he has yet seen of the sort. This is partially visible in the translation, where, although to our taste hyperbole superabounds, the elegance and applicability of the eulogistic metaphors is very perceptible. This translation is again the work of my youthful assistant SA'RODA'PRASA'D CHAKRAVARTTI', merely idiomatized a little by myself: it is nearly literal throughout.

The facts made known to us by the text are altogether new. We have heard neither of the *Chhindu* race, nor of rája LALLA. He was it seems the son of MALHANA the younger brother, (*chargé d' affaires*, and probably an usurper,) of *Mánschanda prátápa*, written मांचण्ड प्रताप, a name which the pandit insists upon converting to MA'RTANDA PRATA'PA (powerful as the sun), as more consonant with Hindu nomenclature. MA'NSCHANDA's father was VIRAVARMA who is simply stated to be of the race of CHYAVAN, a *mahárishi* of mythologic fame, who captivated and married the daughter of one rája SARJATI; but as she disapproved of his venerable age, he interceded with ASWINIKUMAR, dipped himself in a pond and was rejuvenilized in the shape of that god. On the celebration of his nuptials, the gods being present, INDRA, astonished at his new disguise levelled his thunder at the *muni*, who then petrified the god with his frown, as is stated in the text.

The temples thus appear to have been built by a petty rája and his wife, in the Samvat year 1049 at a village called *Mayuta* in the district of *Bhusana*. Enjoying the advantage of proximity to *Canouj*, they procured good poets and artists to sing and record their praises.

This is the first time I have remarked the name of the alphabetical character mentioned. It is called the *Kutila*, by which denomination we must in future describe all documents written in the same hand, mid-way between the modern Deva-nágarí and the *Gaurí* type. I have given a specimen and the alphabet in Plate XLI. It is a peculiarity that the vowels or diphthongs *ai* and *ao*, are always written like *é* and *o* with a single mark above the line. The long *í ú* and *ai*, initial, do not occur.

Transcript in modern Deva-nágarí.

हेलदुष्टोग्रपीडाभरनमदचलोत्सङ्गसंभारदूरभ्रश्यद्भूभारतिर्य्यग्दलितमणिफणामण्डले भोगिराजे तत्कालोद्भ्रान्तलोकत्रितयकृतमहास्तोत्रमन्त्रावतारः पायाद्वः पारराघ्नः भ्रमितदृशशिरः भ्रौर्य्य वीर्य्यावलेपः ॥ १ ॥

भ्रूलक्षतद्विरददानवकुम्भमुक्तामुक्ताकलापकलितामलकण्ठकान्तिः विश्वं पुनातु गिरिजा वदनारविन्दे चन्द्रोपनीतपरिवेशमिवोद्वहन्ती ॥ २ ॥

लक्ष्मीविभ्रमकेलिसद्मसुभटव्यापारलीलास्पदं प्रख्यातक्षितिपालनन्द जलधिः श्रीराजहंसीसरः सद्धोरव्रततीर्णसर्व्वकुमुदप्रह्लादनेन्दुर्द्विषद्वंश्र भंग्रदवानलो विजयतां क्ष्मिन्दुक्षितीशान्वयः ॥ ३ ॥

उत्पत्तिस्थहि पुरा च्यवनान्महर्षेर्व्यक्तव्यलीककलिते चिदशाधिनाथे तद्दर्पनिर्द्दलनदत्तकठोरदण्डैरस्मासु दिक्षु यशसैव सहप्रसिद्धात् ॥ ४ ॥

वंशेऽस्मिन् सितकीर्त्तिकन्दलवति श्रीवीरवर्म्माख्यया ख्यातोभूद्भुवि भूषितावनितलो राजन्यचूडामणिः जन्मस्थानमिवाकलय्य कमला तुङ्गा त्मनांभाविनां भर्ट्टणामवने प्रकारचतुरा यस्यालयान्तःस्थिता ॥ ५ ॥

त्यागी धर्म्मपरः पराक्रमधनः सत्यप्रियः कीर्तिमान् सत्सभ्यानुगतः शुचिर्दृढमतिर्मानान्वितो नीतिमान् शौर्य्यादार्य्यविवेकधैर्य्यनिलयो यः सङ्गतः सज्जनैर्युक्तः सर्व्वगुणोदयेन महता सौरावनीपोभवत् ॥ ६ ॥

तस्मादत्युग्रतेजःप्रसरनियमितारातिपक्षोपसङ्गः श्रीमार्त्तण्डप्रतापः सकलवसुमतीभूषणं भूधरोभूत् यस्योद्योगप्रसर्प्पद्बलभरदलितक्ष्मात लक्ष्माक्षुवीरः शेषोनिश्वासशोषादगमदरिनतं निर्ज्जनं भोगिसङ्घ ॥ ७ ॥

यत्सैन्यगन्धगजगण्डगलन्मदाम्बुसंजातचन्द्रकशतैरिव मुद्रितासु दूरे विपक्षकरिणीवनदन्तिनोपि भूयो नवारिजगृधुः सरसीष्वरण्ये ॥ ८ ॥

यः सेवा गतराजचक्रमुकुटोद्दृष्टांघ्रिपीठस्थलो भर्त्तायच्चतुरंबुराशिरशनाभङ्गारवत्या भुवः विक्षेपैरिव यस्य ते रघुपतेराशोधिताः सिन्धवो यत्तस्यापि महाकुलाचल इवावष्टभ्य तस्थौ भुवं ॥ ९ ॥

यस्यैषा राजधानी रजनिकरकराकारकान्तैर्गुणौघैः पूयराशापिरम्या सुरुचिमरकतश्यामलैः कान्तकान्तैः उद्यानैर्नन्दनाभैरतिविशद सुरासे कमुच्चैः सुराणां प्रासादैरुन्नतायैरमरपतिपुरीस्पर्द्धिनी वा विभाति ॥ १० ॥

तस्यानुजः समभवद्भुवभक्तिनम्रः श्रीमल्लराज परिघपीवरबाहुदण्डः भ्रातुः क्षपानुतुलिताहितराजचक्रं योलीलयैवमवनेर्धुरमाबभार ॥ ११ ॥

लब्ध्वा ततः सुविपुलामपि राजलक्ष्मीं भक्तिं परामकृतदेवगुरुद्विजेषु प्रीत्यै सुहृत्स्वजनबंधुजने जनिष्ठदुष्टक्षयादतनुतातिमुदम्प्रजासु ॥ १२ ॥

तस्य प्रिया पिचुलकीश्वरराजवंशसम्भूतिरुज्ज्वलगुणाभरणाभिरामा गीताजगत्यमहिलेति समस्तकान्त शुद्धान्तवक्त्रकमलेन्दुकला बभूव ॥ १३ ॥

तस्यां श्रीलक्ष्मनामाजनि जनितमहामण्डलीशः शशाङ्कः शूरः कुन्देन्दु दन्तद्युतितुलितगुणालंकृताशामुखश्रीः योसौसामन्तचक्राचलकनकगिरिर्विद्रुतारातिलक्ष्मी तिर्य्यग्रोचान्तपातादृतभुजशिखरश्चिन्दुवंशप्ररोहः ॥

चित्रं यदस्य किल जन्मदिने समन्तात् श्रीमच्छतस्य भवने परम प्रमोदात् प्रावेदयंन्नु दयमंबरतः पपात भृङ्गालिमङ्गलरवैरिव पुष्पवृष्टिः ।

नोन्निद्रा नलिनी न चार्पितमनः स्निग्धा सतां सङ्गतिर्नोत्फुल्लत्व का नता वनलता सीमासशस्यानवा नोद्दामाकविभारती च तथा हृद्या शरत्कौमुदीलक्ष्मीर्यस्य यथा च वेदविदुषामास्येन्दुनिस्यन्दिनी ॥ १४ ॥

कैर्व्वावैरपरैर्धराधिपतिभिर्मान्यैर्धरा रक्षिता येषान्तिष्ठतिदुर्धरा च वनिता श्रीरन्यभोग्या गृहे नाभूदस्ति न नापि कोपि भविता भूपालचूडामणि र्यः श्रीलक्ष्मनरेन्द्रचन्द्र सदृशस्त्यागेन भोगेन च ॥ १७ ॥

व्यास्ते सङ्गरसङ्गताहितमहामातङ्गकुम्भस्थलीसिन्दूरारुणकान्तिरुज्ज्वलयशस्तेजोभिरिद्धस्तुतः उत्खातारितमाः प्रतापविसरैराक्रान्तदिङ्मण्डलश्चिम्भांशोस्तुलनां विभर्त्ति भुवने यन्मण्डलोग्रर्तुना ॥ १८ ॥

कण्ठे मुक्तायमाना शिरसि हिमगिरेरूर्द्ध गङ्गायमाना ज्योत्स्निज्योत्स्नायमाना दिशि दिशि करिणां कुम्भमालायमाना उच्चैर्दैवालयानामुपरि सितपताकायमाना यदीया कीर्त्तिर्भ्रान्ता समन्तादनुनदिपुलिने राजहंसायमाना ॥ १९ ॥

कष्टं काले कलावप्यभिभवति जगत् कूपवापीतडागैरासन्नारामसत्रैः सुरसदनमठैर्म्मण्डितायाममुष्याम् भूम्यां मूर्द्धावहन्त्यामतिसुजन जनानन्दितायां नगर्य्यां यस्मिन्धर्म्मावतारे प्रकृत कृतयुगारम्भसम्भावना भूत् ॥ २० ॥

यः शासनान्यतिसमृद्धजनान्वितानि सीमांतसभ्यवसुखानि ददौ द्विजेभ्यः पार्श्वस्थशस्यतरुषण्डमनोहराणि पुण्यानि निर्म्मलनदीतट वासभांजि ॥ २१ ॥

गङ्गाभगीरथेनेव येन मार्गोपदर्शिना खपुरीसन्निधौ रम्या पुण्या कठ नदी कृता ॥ २२ ॥

तस्याभवत्प्रणयिनी मधुसूदनस्य लक्ष्मीरिवामलकुलांबुनिधेः प्रसूता सर्व्वावरोधनवधूमुखपद्मषण्डप्रालेयवृष्टिरपराहि च यापिलक्ष्मीः ॥ २३ ॥

भक्त्याच या विनयनम्रतया च पत्युश्चेतोजहार गुणवत्यनुरागिणी च रम्यं हराद्रिसुतयोरिवतत्तथाहिप्रेमापिरूढमनयोरितरेतरस्यं ॥ २४ ॥

आरामोद्यानवापीषुचत्वरायतनेषुच कृतानि क्रियमाणानि यस्याः कर्म्माणि सर्व्वदा ॥ २५ ॥

दीनानाथ विपन्नेषु करुणान्वितचेतसः सर्व्वेषु भुञ्जते यस्याविप्रसङ्गा दिने दिने ॥ २६ ॥

इत्थं विविक्तमनसोः परिवर्द्धमानधर्म्मप्रबन्धविगलत्कलिकाल वृत्त्योः एकत्वयोरमुमकारयदिंदुमौलेः प्रासादमद्रितनयाभवनं तथान्या ॥२७॥

सुरगृहयुगमेतत् तुङ्गकैलासशृङ्गद्वितयतुलितकान्तिश्वेतमुच्चैः सुधा द्विःवितरति हृदि नांतर्व्विस्मयं कस्यवा तत्प्रहतघनपताकाकम्पितांभो दवृन्दम् ॥ २८ ॥

यावत्सकौस्तुभमुरोमुरमर्द्दनस्य प्रभोः प्रणाङ्गशकलाभरणं शिरश्च यावत्सरिन्दुवनितासहिताः समस्तास्ता देवतास्तदचला भुवि कीर्त्ति रेषा ॥ २९ ॥

स जयतु भुवि लक्ष्मश्चिन्दु वंशप्रवीरः सममतिगुणवत्याकान्तया चेह लक्ष्म्या रिपुगजमदपंकप्लावितायेन येन प्रतिरणमसिनैवालेखि दिक्षु प्रशस्तिः ॥ ३० ॥

भूत्यै सदैव भवने जनसन्निधाना नानाविधानि दुरितानि विनाश यन्ती यापत्यदारपरिवर्गसुहृद्गणस्य श्रीलक्ष्मणक्षमपतेरनघारुदेवी ॥३१॥

भूषणस्य मयूतायां संबद्धभूमिरुत्तमा विधाय देवपत्नीति देवयोः प्रतियाकिता ॥ ३२ ॥

पूजासंस्कारहेतोश्च शिवयोः शासनीकृतः दामदायस्य यादोपि श्रीलक्ष्मेन सुकीर्त्तिना ॥ ३३ ॥

प्रख्यातवस्तुमुनिवंशसमुद्भवोभूद्धोनुरूपचरितःशिवरुद्र नामा तत्सूनु
ना विरचिताभिनवा प्रशस्तिरेषा प्रसन्नकविना किलनेहिलेन ॥ २४ ॥

यस्य प्रसन्नसरलापदमालिकेयं प्रल्हादहेतुरधिकं सदलंकृतिश्च श्रीलु
ब्धनिर्म्मलगुणग्रथनाभिरामा मुक्तावलीव हृदये विदुषां चकास्तु ॥ २५ ॥

विष्णुहरेस्तनयेन लिखिता गौडेन कर्म्मकेनेषा कुटिलाक्षरालि विदु
षा तत् क्षोदित्वा विधानेन ॥ २६ ॥

कान्यकुब्जागतेनापि रामदेवसुतेन च उत्कीर्णा सोमनाथेन टङ्कवित्त
न शालिना ॥ २७ ॥

संवत्सरसहस्र १०४९ म मार्गवदि ७ गुरुदिन ४

Translation, by Sárodáprasád Chakravarttí.

1.* May he, to whom the astounded inhabitants of the three worlds offered solemn hymns and prayers, when the jewelled hood of the chief of serpents *(Ananta)* bent under the weight of the far-falling mountains impinging on the lap of the yielding earth, on his easy effort to check the outrages of the wicked (giants); and who humbled the ten-headed (Rávana) vain of his strength and valour,—save you from a multitude of sins!

2. May GIRIJA' (the mountain-born goddess) beauteously adorned with a string of pearls fallen from the heads of the *Dánava*-like elephants, seeming to spread a moon-like halo round her lotus face, sanctify the universe.

3. May the royal race of CHHINDU, of erst the scene of LAKSHMÍ's pastime and dalliance, the field of war and exercises of well-disciplined soldiery, the sea of delight of famous princes, the lake wherein LAKSHMI' disported as a swan, the moon of repose of those who had completed the career of heroes and a consuming fire to their enemies, be honorable.

4. A *Mahárishi* named CHYAVAN, he whose frown restrained the pride of the chief of gods (INDRA) when he had committed the well-known crime †:—who by his fame was celebrated in all quarters of the world—was the founder of this race.

5. Of this family, famed for many good actions was born VIRAVARMA, who was the ornament of the world, and the crown-jewel of kings; in whose house LAKSHMI' took up her abode, foreseeing in it the birth-place of many future eminent persons who would be her protectors.

* KAMALA'KA'NTA would read हेला लट्टोग्रचापाभर, &c. 'easily taken up bow of SIVA,' &c. i. e. by the weight of the bow of SIVA, which Ráma easily took up. This agrees better with the context, which alludes to the destruction of the world produced by the breaking of this bow by Ráma.

† See the notice of this crime in the preliminary observations.

6. He, VIRAVARMA, in noble qualities well resembled the kings of the solar line; he was powerful, pious, beautiful, famous, pure, serious, venerable, veracious, moral, surrounded by the educated, attended by virtuous men, his court was the seat of heroism, integrity, patience and other virtues.

7. From him descended MA'NSCHANDAPRATA'PA, a man of warm spirit, who annihilated his foes as mud dried up by his rays; who was the ornament of all people, nay of the whole world; before whose armies, the multitude of heroic enemies depressing the earth with their heavy tread, retreated gasping into the abode of serpents *(Pátála)* and bore it down with their weight.

8. The juice exuding from the temples of his odorous elephants, in moon-like crystals, so spread over the forest-tanks that neither the wild elephants nor those of his enemies dare quench their thirst therein.

9. His footstool was worn by the crowns of the numerous princes crowding to do him homage. He was the lord of the earth whom the three great oceans encircle as a waistband *(rashoná)*. He dried up the ocean by the continual intercourse of foreign princes, as Ráma of old. He occupied the ocean like the mountain on the sea-shore.

10. His kingdom rivalling the habitation of the chief of gods by its magnificent buildings, shining bright and beauteous as the moon-beam with its white tenements, and charming with its *nandana*-like gardens abounding in pleasant trees of dark emerald hue,—is become white with the high temples of the anointed gods.

11. His younger brother the stout-armed MALHANA, a devoted worshipper of *Siva*, willingly received charge of the world, his kingdom, filled with a multitude of princes proportionate to his kindness,—from his elder brother.

12. Though gaining such a vast prize as LAKSHMI', he always retained his devotion to the gods, his spiritual parents and the bráhmans. He was born for the joy of his friends, intimates, and kinsmen, and spread delight among his subjects by destroying the wicked.

13. His wife CHULUKI', adorned with shining qualities was the nonpareil of her day, and was like the new moon to the lotus faces of his other wives; she was descended from the royal line of ISWARA.

14. From her was born a moon-like heroic prince named LALLA, who soon mastered the world. On all sides shone the purity of his virtues as the white kumuda flower, the moon, or ivory. He was the *Sumeru* among the circle of the mountains of his military officers. On his arm LAKSHMI' cast a fond glance as she quitted the house of his enemies. He was the root of the CHHINDU line.

15. Strange was it that at his birth flowers were strewed from heaven on the palace of MALHANA, and bees swarmed to sip their honey; seeming by their hum to announce his future greatness*.

16. His words were full of pleasantness, exceeding far the full blown lily, or the company of the wise men, or the shrubs bowing with the load

* So Cicero of Plato: 'dum in cunis apes in labellis consedissent.'

of full blown flowers, or the fields of bending corn, the inspiration of the poet, or the moon beam in the autumn, or even the sacred words flowing from the mouths of the *vedantis*.

17. By what respected hero, lord of the world, was earth defended in his time? the goddess (LAKSHMI') whom none other can restrain or enjoy, is to him as a wife. No princely jewel of the crown of kings ever lived, lives, or will live to equal him in bounty and enjoyment.

18. He lives in a halo of glory like the sun in his summer brightness, and fills the world with his power. His beauty is reddened by the vermilion of the heads of his enemies' war elephants; his fame like the moon's has been the theme of praise; he destroys his enemies as the rays of the sun dispel the darkness.

19. His spreading fame encircles the world as a necklace of pearls, or as *Gangá* around the highest peak of the Himálaya, as the moon-beam on the sky, as the wreath on the elephant's head, the white pennant on the temple of the gods, and the wild geese on the banks of the rivers.

20. On his advent, although the earth now groans under the *Káli-yuga*, the golden age (*Satya-yuga*) again visited this town, a town adorned with wells, lakes, tanks, and neighbouring parks stocked with various animals, whose inhabitants are alway rejoicing, and which is borne on the crest of the earth.

21. He presented these sacred villages, inhabited by the wealthy and the civilized, shaded by pleasant trees and watered by pellucid streams, in a chartered gift to the bráhmans.

22. He caused to be dug a beautiful and holy canal* near his own palace, himself a director of the right course to his subjects, as BHAGIRATHA was to GANGA'.

23. His wife named LAKSHMI' was as affectionate as her namesake to MADHUSUDANA: she was regarded as a second goddess, descended from the sea of a sinless family, and was like a snow shower to the lily-faces of other women in the inner apartments.

24. By her love and gentleness she stole the heart of her husband, by her accomplishments she retained his affections. Their mutual love was equal to that of SIVA and PA'RBATI'.

25. Whose many virtuous deeds already done or to be still performed, are visible in groves, gardens, lakes, and many other extensive works.

26. All these luxuries enjoyed daily by multitudes of *bráhmans*, are bestowed by her whose heart compassionates the poor, the helpless, and the afflicted.

27. In this way the minds of the husband and wife being sensible of the instability of earthly possessions; and the stain of the *Káli-yuga* having been removed by their growing virtues, the one (or rája) has caused this temple to be established in honor of the god who wears a crescent in his brow; while the other (or queen) did as much in honor of PA'RBATI'.

* *Kathanáma*, 'called *Kaṭha*,' probably the vulgar term applied to it as an artificial canal, *Anglice* 'cut.'

28. Whose heart is not filled with astonishment at these two divine temples which may be compared with the beauty of the two lofty peaks of *Kailása;* which are beautified by their handsome stairs, and whose banners agitated by the winds have dispersed the gathering clouds.

29. As long as the *Kaustubha* jewel shall rest on the breast of the destroyer of *Madhu* (Vishnu); and the head of Sa'mbhu shall be ornamented with the crescent:—as long as Indra and all the gods shall tarry with the wives of the moon;—so long shall the fame of this act endure.

30. May prosperity always attend him and his equally endowed lady Lakshmi'—him, the chief hero of the Chhindu line—who with sword besmeared with the mud formed by the exudation of his enemies' elephants' temples has carved out his praise on all sides.

31. May Devi', who dwelleth among mankind to promote their prosperity and avert evil, destroy the sins of Lalla, of his family, children, and intimates.

32. The villages of *Mayúrá* in *Bhushana* with its adjacent lands were consecrated to the above mentioned god and goddess, under the denomination of *Devapalli*.

33. The famous Lalla granted by charter one-fourth of his revenues to the same deities for their worship and other ceremonies.

34. This inscription was composed by the poet Neha'l, son of Siva Rudra, of the race of Vatsyamuni, an attendant at the court of the rája, whose character was worthy of his name.

35. May Neha'l's wreath of mellifluous verses shine on the bosom of the learned like a string of pearls, the source of general delight, ornamented with flowery metaphor and tied with the string of Lalla's virtues.

36. This composition was copied by the son of Vishnu-hari an inhabitant of *Gaur*, a proficient in the *Kutilá* character.

37. It was engraven by Somana'tha the son of Ka'madeva, who came over from *Kanyakubja*, well skilled in the use of the instruments of engraving.

In the Samvat year 1049, on the 7th of the dark half of the month of *Márga (Agrahana)*, Thursday. (Corresponding with Thursday, 5th November, A. D. 992.—See Useful Tables.)

VIII.—*Section of the strata passed through in an exprimental boring at the town of Gogah, on the Gujerat peninsula, Gulph of Cambay. By Lieutenant* George Fulljames.

Agreeably to my promise I have the pleasure to enclose a section of the strata penetrated in the bore at *Gogah*, by which you will perceive we have succeeded in reaching a considerable depth, and although the work is still progressing I have thought it better to send a section of what has already been done. I have only 28 feet of rod left, and unless I can succeed in changing the stratum before that is expended

I shall be obliged to stop. Had I but cast-iron pipes to lower I should not at all despair of success until at any rate I had reached 600 feet. From the sides of the bore falling in while the work is at rest I have been obliged for some time to employ two parties, and to keep going night and day.

I have much pleasure in mentioning that I have discovered fossil remains down the coast and in similar formation to that of *Perim*. The specimens that I have obtained however are not good ones having been for a long time exposed to the action of the sea, and atmosphere. Should I succeed in obtaining any that appear worthy of the acceptance of the Asiatic Society, I shall do myself the pleasure to forward them.

A similar formation to that of *Perim* exists along the whole line of coast from *Gogah* to *Gossnat* point, where a firm sandstone is quarried and of which the splendid *Srâwak* temples of *Pattitona* are all built.

This fact ascertained, settles the question of whether *Perim* was originally a part of the continent:—and it only remains to prove how the separation has taken place? My opinion is that it has been effected by the force of the current during the ebb tides and the swell of the sea during the south-west monsoon.

To the north-west of *Gqaoh* and about one mile inland I picked up a piece of the rib of some large animal. The rock had been here dug out for building. It lies nearly horizontal and not above eight inches in thickness. I am still in hopes of getting some more fossil specimens from this spot.

List of Strata.

	Ft.	In.
Rubble containing broken stones, tiles and ashes,	4	0
Hard earth with stones imbedded,	1	0
Sand and gravel mixed and salt water,	11	0
Stiff black clay like that on the beach,	6	0
Sandstone in thin seams,	0	4
Sand and clay, yellowish in color,	9	8
Sandstone soft,	13	6
Reddish sand holding salt water,	0	6
Sandstone hard,	2	0
Sand yellow,	0	4
Sandstone,	0	8
Gravel and clayey sand,	1	0
Very stiff clay with pieces of sandstone imbedded very hard,	4	0
Stiff blackish looking clay,	1	0
Sandy clay with pieces of sandstone,	4	0
Yellow sand with seams of clay containing a few pieces of sandstone,	6	0
Very hard siliceous sandstone,	9	0
Stiff yellow and whitish clay with kanker,	0	2

Stiff yellow and whitish clay with nodules of sandstone,	5	10
The salt water rose 4 feet in the bore and become brackish. Nodules of sandstones imbedded in sand,	11	0
Yellow sandy clay,	8	0
Yellow sandy clay with pieces of mhur,	16	0
Stiff black clay with pieces of sandstone containing a good deal of mica,	3	0
Stiff black clay but darker,	2	0
Stiff clay greenish in color, containing small pieces of rocks similar to cornelian, quartz, and agate, also pieces of broken shells,	4	0
The same clay with less stones, a strong smell of hydrogen gas came up the pipe, a quantity of pyrites was also brought up,	1	0
Blue clay with pyrites, and latterly a little sand between the layers of clay,	19	2
Blue clay with siliceous sand mixed, also pieces of rock, such as sandstone; quality, a greenish sandstone full of holes, these holes are full of clay and pyrites: indurated clay and small black particles like coal,	8	3
Slate from the appearance of what came up attached to the jumper,	1	2
Stiff blue clay,	14	0
Indurated clay or slate, and latterly with sand intermixed,	7	7
Blue sandy clay with siliceous sand separating the seams of clay,	6	5
The same with pyrites,	3	7
Sandy clay with small white pebbles, a good deal of sand appeared between the layers of clay with fragment of what appears a jet, a piece of a broken shell resembling the cockle was brought up,	4	0
Blue clay darker in color,	7	0
Blue clay with pieces of whitish earth,	4	5
The same sandy clay with here and there a little pyrites,	32	4
The same clay with a little more sand between the seams,	7	2
Stiff clay containing black, white and yellow colored earths, also some pieces of rock was brought up,	3	10
Stiff blue clay with seams of white sand,	4	6
The same clay with a few pieces of rock,	0	9
Stiff blue clay,	10	0
Bluish lias clay with shells and some pieces belonging to coral,	2	0
Stiff black earthy clay containing broken shells,	19	0
Very stiff blue clay with a good deal of sand whitish in color,	6	5
Bituinous clay containing a large quantity of pyrites, fossilized wood which burns,	4	11
Stiff blue sandy clay	17	0
Stiff blue sandy clay with seams of the bituminous clay occasionally,	10	8
	320	0

P. S. Since this was written the Bore has been carried 15 feet deeper without any change in the soil. The lignite or fossil wood burns, and emits a smell of coal; with nitric acid it effervesces and a bright brown smoke arises; with sulphuric acid this does not take place: on burning it gives out a very strong suffocating smell of sulphur and arsenic.

IX.—*Note on the black and brown Floriken of Guzerat.* By Lieutenant George Fulljames.

Having been induced from reading Colonel Sykes' catalogue of birds in the Deccan to make some observations of the *Otis fulva* and *Otis aurita*, I have the pleasure to send you the following remarks for insertion in your journal.

The *Otis fulva* or brown *Floriken* is a bird common to our side of India, and is found at all seasons of the year in the Deccan particularly; in *Guzerat* however they are more frequently found on the near approach of the monsoon, and in the year 1834 were so plentiful that I bagged no less than 79. Almost the whole of these I examined; and from the facts ascertained, I am of opinion that the *Otis aurita* or black *Floriken* is the cock bird of the *Otis fulva*; that he is only to be found in his black plumage during the monsoon. That he commences changing his feathers early in April and continues molting till June, when he has generally become the black *Floriken*. That at this season he never weighs more than 1 lb. 4 oz. avoirdupois, and seldom so much; while the brown or hen bird weighs at least 1 lb. 8 oz.

That you rarely see the two together at this season, and that I have shot them in all stages of their moulting until I got the perfect black *Floriken*, and on examination have invariably found the testes most fully devoloped; while in the brown or hen birds the ova have been equally distinct.

They are so plentiful sometimes in *Guzerat* that they may be bought from the Wagrees alive for a few pice.

I am of opinion also that the *Floriken* migrates, but from what part of India I know not. I once heard of a flight being seen coming from the north and going in an easterly direction, but cannot vouch for the fact.

One observation has often occurred to me, which is, I have never shot the bird losing his black feathers and becoming brown; and the only way I can account for it, is that either the bird leaves the country, or it being at that season of the year when a sportsman seldom ventures out, the whole country being covered with vegetation, and the *Floriken* being remarkably quick in hearing they escape unroused.

This one fact I will venture to assert, that no person has ever yet shot a black *Floriken* with the ova developed; it therefore only remains to be proved whether the cock bird undergoes these changes yearly or not, and which will be difficult to ascertain, for in confinement I find they do not thrive, having frequently attempted in vain to keep them.

X.—*Further elucidation of the lát or Sílasthambha inscriptions from various sources. By* JAMES PRINSEP, *Sec. As. Soc.*

It was one of my principal objects in publishing my hasty reading of the Feroz lát inscription in the July journal, without awaiting the corrections and illustrations of a more matured examination, to draw to me the aid of others whom ability, opportunity and interest in the subject, might enable to throw light upon this highly curious monument. Already am I reaping abundantly the fruits of this expectation, and I lose no time in placing them before the Society.

The first correction in point of importance comes as usual from *Ceylon*, the very *Lanka*, (to apply its own fabulous prerogative metaphorically,)—the very *first meridian* whence the true longitude of all ancient Indian history seems destined to be calculated!

I had ascribed the foundation of these pillar monuments to a king of *Ceylon*, because his was the nearest or the only approach to the name recorded in the inscription. I did so before I had read it through, or I should perhaps have felt the difficulties of such a supposition greater when I found him making roads, digging wells, and usurping other secular authority in a country over which he was not himself reigning. It was but the utter absence of any such name in our Indian lists that drove me to a neighbouring state; one so intimately connected, however, with the *Magadha* court in religion, that there need be no positive impediment to the exercise of munificence by his brother convert on the *Ceylon* throne towards the priesthood of king ASOKA's Indian *Viháras*, nor to their acknowledgment of favors, or adoption of precepts. When I found another inscription in the *Gaya* caves alluding, with the identical pronomen of *Devánampiya*, to DASARATHA, the grandson of the above monarch, I certainly felt more strongly the impression of the Indian origin of the former; though I still sought in vain for any licence to such an assumption from the pandits and their *purdnas*.

The Society will then I am sure participate in the pleasure with which I perused the following passage in a letter just received from the Honorable Mr. GEORGE TURNOUR, our Páli annalist.

"Since I came down to *Colombo*, I have made a most important discovery, connected with the Páli Buddhistical literature. You will find in the Introduction to my Epitome, page lx. that a valuable collection of Páli works was brought *back* to *Ceylon* from *Siam*, by GEORGE NADORIS, modliar, (chief of the cinnamon department, and then a Buddhist priest) in 1812. In that collection I have found the *Dipowanso* or *Maháwanso* compiled by the fraternity at *Anurádhapura* to which the *Maháwanso* refers!! It opens with the passage quoted in the intro-

duction p. lxi. In running over the book cursorily I find the following lines in the sixth *Bhánawáro* or 'Section of 250 lines' in reference to DHAMMA ASOKO :—

Dwé sattáni wassáni aṭṭárasawassánicha, sambuddhé parinibbuttè, abhisétto Piyadassino.

After a few lines descriptive of the ceremonies performed at his inauguration, I find

Chadaguttassáyan nattánatta Bindusárassa, atrajo rajaputto tádá asi Ujjénikaramolino.*

Here then we find that ASOKA was surnamed PIYADASSI ; and if you will turn to the 5th chapter of the *Maháwanso*, especially pp. 28, 29, you will see the circumstances under which Buddhistical edifices were simultaneously erected all over India. When I have seen your article in the July No. I hope to be able to examine this *Dípowanso* carefully, and if I can see any further ground for identifying PIYADASSI with ASOKO, I will not fail to give you particulars."

The date, (218th) year of the Buddhist era (leaves no doubt whatever of the identity of the party, and the term *nattánatta*, rendered by my pandit *naptur-napta*, great-great-grandson must therefore be wrong. RATNA PAULA also assures me that the verse requires the elision of the first two redundant syllables ; leaving simply *napta*, or *nattá*, grandson. The Buddhist and Brahmanical texts both concur in the successive relationship of the *Magadha* princes down to this point†.

The line as corrected by RATNA PAULA will run thus :

Chandraguttasa yan natta, Bindusárassa atrajo, rájaputto tadá ási, Ujjenikaramólino.

and united with the former passage may be translated :

"Two hundred and eighteen years after the beatitude of *Buddha*, was the inauguration of PIYADASSI.....who, the grandson of CHANDRAGUPTA, and own son of BINDUSA'RA, was at that time *Viceroy* at *Ujjayani*."

Mr. TURNOUR has thus most satisfactorily cleared up a difficulty that might long have proved a stumbling block to the learned against the

* The two passages in Sanskrit will run

द्विशतंवर्षाः अष्टादशवर्षाश्च संबुद्धे परिनिर्वृते अभिषेकः प्रियदर्शिनः।

Two hundred years and eighteen years after *Buddha* had attained perfection, (was) the regal anointment of PIYADASSI.

चन्द्रगुप्तस्यायं नप्तृर्नप्ता (more correctly दृढप्रपौत्रः) विन्दुसारस्य चात्रज राजपुत्र तदाचासित उज्जयनीकरमूलिनः

This the grandson of the grandson of CHANDRAGUPTA, and the own royal son of BINDUSA'RA, was at that time the taker of the revenue of *Ujjain*.—J. P.

† See extract from the *Bhágavat Purána*, in a preceding page, 677.

reception of these *lát* inscriptions as genuine monuments of a fixed and classical period, the most ancient yet achieved in such an unequivocal form.

The passage of the *Maháwanso* alluded to above as proving the erection of numerous *Sthupás* and *Viháras* by him is by no means free from exaggeration; but the general facts are certainly borne out by the extensive diffusion of these curious edicts: I give the whole from the indicated page in Mr. TURNOUR's "Epitome."

The transaction is referred to the fourth year of ASOKO's reign, nor can I find any thing noted of so late a date as the 27th year, which is sufficient to exclude any actual mention of the erection of the *Silasthambhas*:—

Sutwána chaturásiti dhammakhandáni; sobruwi "pujemi téhan pachchékan viháreniti" bhupati.

Datwá tadá channavuti dhanakótin mahipati purésu chaturasiti sahassésu mahitalé.

Tattha tatthéva rájuhi viháré árabhápayi: sayan Asokárámantu kárápetun samárabhi.

Ratanattaya nigrodhagilánánanti sásané pachchékan sata sahassan so adápesi, diné diné.

Dhanéna buddhadinnéna thúpapúja anekadhá anékésu viháresu anéké akarun sadá.

Dhanena dhammadinnéna pachchayé chaturo varé dhammadharánan bhikkhúnan upanésun sadá narú.

"Having learned that there were eighty-four thousand discourses on the tenets of that doctrine (of *Buddha*), 'I will dedicate' exclaimed the monarch 'a *viháro* to each.' Then bestowing six thousand *koṭis* of treasure on eighty-four thousand towns in *Jambudipo*, at those places he caused the construction of temples to be commenced by the (local) rájas; he himself undertook the erection of the *Asokarama* (at *Pupphapura**). He bestowed daily, from his regard for the religion, a lac separately to the '*ratanattya*' to NIGRODHO, and to infirm priests.

From the offerings made on account of Buddho in various ways, in various cities, various festivals were constantly celebrated in honor of '*thupas*.'

From the offerings made on account of the religion the populace constantly bestowed the four prescribed offerings on the priests, the repositories of true religion."

It must be remembered that ASOKA during the reign of his father at *Pátaliputra*, acted as *uparája* or sub-king at *Ujjain*. His supremacy probably therefore extended farther than that of any other Indian monarch. The minute particulars we now possess of his history and of that of his predecessors, through Mr. TURNOUR's *Páli* authori-

* This town is called *Pápapura* and *Páwápuri* by Jain authorities, (see COLEBROOKE, As. Res. IX.) But the more natural Sanskrit equivalent is *Pushpapuri*, "city of flowers."

ties, will be of essential use in expounding our new discovery, and my only excuse for not having taken the epitome already published as my guide before is, that the identity of PIYADASSI was not then established.

I think we shall be able to discover the actual names of many of the Buddhist monasteries now visible by their ruins or by columns still standing: thus the uncouth name read in the *Bhilsá* inscription No. 2 (see p. 458), as *Kokunada sphota*, (or *boda*) *vihára*, may probably turn out to be *Kukkutarama vihára* of the following passage.

Purisánaṇ dasadhéhi satéhi pariwárito, gaṇtwána Kukkutárámán sonakatthéra maddasuṇ;

Samápatti samáyaṇnaṇ nisinnaṇ sanwutindriyaṇ wandité nalapantan tan natwá sanghama puchchhi taṇ.

"Attended by a retinue of five hundred men, having repaired to *Kukkutarama vihára*, they saw there the thero SONAKO seated absorbed in the *Samepatti* meditation, with the action of the senses suspended. Perceiving that he was silent while he bowed to him, he questioned the priests on this point."

The *Allahabad vihára* was called *Walukaramo*; that of *Rájagriha*, *Weluwana*, the *Sarun* one probably *Anuradhapura*, that at the capital *Pupphapura*, *Asokaramo*, &c. In three years they were all completed if we may put faith in the following extract:—

Wihárá té samáraddhé sabbé sabbapurésu pi sádhukaṇ tihi vassehi nitthapésuṇ mahóramé.

Thérassa Indaguttassa Kammádhiṭṭháyakassatu iddhiyáchásu niṭṭhási Asokaramasa whayo.

Jinéna paribhuttesu ṭhánesucha, tahiṇ, tahin, chétiyáni akárési ramaṇiyán bhupati.

Purékhi chaturásiti sahassehi samantató, lékhé ékáham ánésuṇ wihárá niṭṭhitá iti, &c.

"All these individuals in different towns, commencing the construction of splendid wiháras completed them in three years. By the merit of the thero INDAGUTTO, and of that of the undertaker of the work, the *wihara* called *Asokaramo* was also completed in that time. At the places at which the vanquisher of the five deadly sins had worked the works of his mission, the sovereign caused splendid dagobas to be constructed. From eighty-four cities (of which *Pupphapura*) was the centre, despatches were brought on the same day, announcing that the *wihára*s were completed, &c."

Whole pages of the *Maháwanso* might be quoted bearing upon the various points of the inscription:—thus, the conversion from a sinful life to righteousness, with which the north tablet commences, may be explained either by the circumstances of ASOKA's rise to the throne over the bodies of his 99 murdered brethren; or by his slaughter of the priests at the chief temple, after the seven years surpension of the *uposatha* ceremonies, when the faith was purged;—but for all these I must refer to the work itself. The cause of the addition of *Dharma* to the *Pauranic* name of ASOKA, by Buddhist writers, is explained in a very satisfactory line:

Esákókoti náyittha puré pápena kammuná; Dhammásokoti náyittha pachchhá puṇṇena kammuná.

"On account of his former sinful conduct (in having murdered his brothers) he was known by the name of ASOKO. Subsequently on account of his pious character, he was distinguished by the name of DHAMMASOKA."

§ 2. *Duplicate inscription from Delhi. Pl. XLI.*

I now turn to an illustration of my text from another quarter, Major P. L. PEW, has fulfilled his promise of forwarding impressions of the broken pillar lying in the late Mr. W. FRASER'S grounds. I should have made them the subject of a separate note but that really they are so precisely the duplicates of the *Feroz* inscription that it is not worth while to do so. The shaft seems to be mutilated and worn in vertical grooves so that many of the letters in each tablet are effaced. Of the fragments received one belongs to the north compartment, beginning with line 10 (see p. 582):—the next much injured, corresponds with the western tablet, beginning with line 10 (p. 587) :—the third and last is nearly perfect; beginning with line 8 of the southern inscription it runs on to the conclusion. The words are separated as in the *Feroz* lát, and from this circumstance I have been enabled to certify a few doubtful readings—although many others are provokingly cut off. I insert a lithographed facsimile of the whole, and annex at foot* all the noted variations of the text, of which proper use can be made when I come to review my labours. Major PEW gives the following particulars of the original locality and present state of the column.

* I may throw the only deviations I can find into the form of *Emendata* thus :—

NORTH INSCRIPTION—in the Roman transcript.

Line 18 for *asinavai*, read *ásinavé*.

19 for *dupaṭavekha*, read du ? *paṭivékhé*.

20 read, *ásinavágámini*.

WEST SIDE—line 10, the letter in chappanti is written ; it must, I think, be a *gh*, formed from the *h*.

Line 12 for *abhitá* we have *abhitá*, fearless.

17 for *yitahanti———yanisanti*, the preceding letters cut off.

18 for *palitikam*, read *pálitikam*.

19 for *nirodhasi*, —— *nirudhasi*.

SOUTH SIDE,—line 8, the words are *avadhiye pátakepicha*, and further on *vadhikokute*, &c., quasi वधः ककुटस्य नोकर्त्तव्यः—'the killing of fowls is not to be done.'

Line 16 we have *tisu chátummásisu sudivasáye*, &c. in Sanskrit त्रिषु चतर्मासेषु सुदिवसे, 'in the *festival* days in the three 4-monthly periods ?

Line 17 the very is properly made plural, *nilakhiyanti*.

13 the word *machhe* is evidently separated from *anuposatham* and connected with *avadhiye* ; 'fish unkilled' is therefore the right reading.

"This very ancient Hindu pillar was dug out of some ruins near a *boulee (baolí)* or well, and was probably destroyed by the blowing up of a powder magazine which I understand once existed near the spot. It consists of five pieces, which when put together measure $32\frac{3}{4}$ feet long: the diameter of the largest piece is 3 feet 2 inches, and that of the smallest $2\frac{1}{2}$ feet. The total weight 372 maunds.

The extreme antiquity of the pillar is vouched by its weather-worn aspect, which must needs be the effect of storms and rains that ran their destructive or beneficial course many centuries ago, since the fragments of this column have only been recently disinterred from the mass of ruin, evidently Hindu, where they had reposed in silence and darkness for ages.

I call the ruins (which are those of a well and its attendant edifices—hewn in the live rock of the hill) Hindu, both from *the style*, which resembles that of the more ancient parts of the *Kutab* and from the *materials*, which in this case also, are *quartz*, of which intractable rock the Mussulmans seldom or ever appear to have attempted the sculpture. The pillar, indeed, is sandstone, and to its perishable nature is to be attributed the imperfect state of the inscriptions. I shall await with some impatience your opinion as to their age and import, and whether their date be anterior to those which have been so unexpectedly deciphered on the láts of Feroz Sháh, *Allahabad, Bettiah*, &c. Hindu tradition dwells fondly on the name and exploits of the rája Prithu or Pithoura, whose name exists from *Petora-gurh* near *Almorah*, by *Delhi*, down to *Ajmere*, where every thing great or ancient in architecture is referred with one consent to this Indian 'Arthur.'

§ 3. *Note on the locality of the láts of Delhi and Allahabad.*

Lieut. Kittoe has favored me with a reply to that part of my papers wherein I called attention to the nature of the buildings at Feroz's menagerie. He also conjectures that the bird mentioned as *ambakapilikâ* should be read *ambakâ*, (or *amrakâ*) *pillaka*, the *pilak* or yellow bird of the mangoe, known to Europeans as the mangoe bird, from its appearance when that fruit comes into season; *pilak* is the present native name, from *pîla* yellow. Mr. Tregear also suggests the same interpretation, and I have no doubt of its correctness.

Remarks on the locality of the láts of Allahabad and Delhi.

The *Allahabad* pillar stood formerly on a stone terrace within the fortress and near the *Jumna* gate; not far from the spot, is a temple (now under ground) called "*Pátál Purí*" (पाताल पुरी), in which is the stump of a Banyan tree called "*Achaya Bat*" (अक्षय वट): it is an object of great veneration.

The temple is buried in the accumulated rubbish of ages, which is found in a greater depth than that of the level of the temple foundations.

The present stone fortress, the work of AKBER and of his son JAHÁNGI'R (whose pedigree is engraved on the pillar) occupies the place of some previous Hindu works of brick, few vestiges of which remain.

I think it probable that the pillar occupied its original position till taken down by Colonel KYD during the alterations that were being made.

Though in all probability the *Achay Baṭ* may be a Buddhist relic it may nevertheless be otherwise, as the Hindus consider the bur *(Ficus Indicus)* as an emblem of SIVA: the peepul *(Ficus religiosa)* of VISHNU; and the pullas or dawk *(Butea Frondosa)* as that of BRAHMA, and venerate them accordingly.

The FEROZ SHA'H lát at *Delhi* was placed (as historians assert) in its present position by the emperor FEROZ, and I certainly see no reason to doubt the truth of it; the style of architecture of the building, on the roof of which it stands, is of the first or Pathání: the same style pervades throughout the whole adjacent buildings. There are no traces of Hindu buildings anywhere near. There is a large bur tree beneath the walls, on the river face, under which is a tomb of some celebrated "peer" who was put to death by order of FEROZ; this spot is held sacred and much resorted to by both Hindus and Musalmans: the tree is very ancient and may have been a holy tree of the Buddhists. The Mahommedans of India venerate the *Baṭ* almost as much as the Hindus do, which would account for its preservation though other idols would have been destroyed. With regard to the quarries from whence the different pillars were brought, I think it probable they were floated on rafts down the *Jumna*, being cut from the sandstone rocks at or near *Rájpúr* (*Bádsháhmahal*) in the *Sewálik*, a few miles above the site of the sunken city of *Béhat*. I made this observation in the year 1831 when I took an experimental trip by water from *Rájghát* in the *Dún* to *Agra*. I believe both láts are of the same kind of stone, the others I have not seen.

A few remarks on the *Kotela* (called by Captain HOARE "a menagerie") may be acceptable.

FEROZ SHÁH'S palace, called the "*Kotla*" was formerly within the north-western angle of the city walls of old *Delhi*, and was the citadel of that place; one face of it was in former years washed by the *Jumna*, which seldom reaches it in these times except in very heavy floods. The works of this citadel were very extensive; the architecture is clumsy in its style and rough in execution, and has no pretence to

Inscription on the Delhi Lát (South tablet)
(commencing with line 8 of the Feroz lát, see page 8.)

J. Prinsep lith.

commences with the 10th line, West side, of the

FERÔZ LAT

STONE WORN AWAY

corresponds with the 10th line, North side.

STONE WORN AWAY

aught but strength; the material is the rough wrought stone found on the spot, which is mostly too hard to admit of being better worked. The building, on the roof of which is the pillar, appears to have been a "*bárahdarí*;" it is square and three stories high, all vaulted: it stands at the bottom of a court-yard close to the ramparts of the river face. There are buildings near, which may have been appropriated to a menagerie, but that on which the pillar stands I should decidedly pronounce not to have been so. The *Kotela* was to old *Delhi* what the *Lál Killa* is to the present city, and was no doubt considered an elegant building in remote times when painted plaister and colored tile were the order of the day. M. K.

XI.—*Proceedings of the Asiatic Society.*

Wednesday Evening, 4th October.

The Hon'ble Sir EDWARD RYAN, President, in the chair.

Lieut. E. B. CONOLLY, 6th Cavalry, and D. F. McLEOD, Esq. C. S. were ballotted for and elected members.

T. H. MADDOCK, Esq. C. S. proposed by Mr. W. H. MACNAGHTEN, seconded by the President.

Dr. THOMAS CANTOR, proposed by the Secretary, seconded by Mr. W. CRACROFT.

Mr. C. TUCKER, C. S. proposed by Mr. WALTERS, seconded by Dr. STEWART.

Mr. JOHN EWART, C. S. proposed by Dr. STEWART, seconded by Mr. WALTERS.

Library.

The following works were presented by the Rev. Dr. MILL.

Psalterium Davidis Regis et Prophetæ aliorumque Vatum Sacrorum Arabice á Gul. H. MILL, S. T. D.

Liturgia Anglicana, Seu Liber Precum Communium et Administrationis Sacramentorum.—Translated into Arabic by POCOCKE, TYTLER and MILL.

Amænitatum exoticarum politico-physico-medicarum, Fasciculi V.

Relandi antiquitates sacræ Veterum Hebræorum.

Auber's Rise and Progress of the British power in India—*presented by the Government.*

The Meteorological Register, August,—*presented by the Surveyor General.*

The Bombay Branch of the Royal Asiatic Society returned thanks for the first part of the 19th vol. As. Researches.

The Secretary notified the vacancy of the librarianship by the death of Dr. L. BURLINI.

Dr. BURLINI was a native of *Italy*. He received his diploma as a doctor of medicine at Florence on the 30th July, 1794. He came to India in the following year and had supported himself by his practice in this city ever since. He was appointed to the honorary charge of our library in 1826, afterwards receiving a trifling allowance of 50 rupees monthly for conveyance. His attention has been unremitted and the society has lost in him a useful and zealous officer, and a kind and worthy associate. He died at the advanced age of 79.

To succeed to the appointment the following candidates had offered themselves.

Mr. CHESTER, Mr. BARFOOT, Mr. C. W. FRENCH, Mr. FLEURY, Mr. LEWIS DACOSTA, Mr. G. S. HUTTEMAN, Mr. J. MORRIS, Mr. P. DELMAR, senior, Mr. D. DRUMMOND, Mr. G. T. F. SPEED.

To these the Secretary begged to add the name of one who, he was sure, would need no certificate of his qualifications to fill the post with honor to himself and

utility to the Society—the distinguished orientalist M. A. Csoma Körösi. He proposed that before taking any of the other applications into consideration, the appointment, with a salary of 100 rupees should be tendered to Mr. Csoma Körösi.

Dr. Mill seconded the proposition, which was carried unanimously.

The Secretary brought up the following:

Report of the Committee of Papers on the proposition of the Statistical Committee, 'that they should be empowered to associate as paying members, persons not on the Society's list.'

The sole grounds of this proposition, as explained by the president of the Committee, were, to add to the means of the Society for meeting any slight pecuniary expences in procuring statistical information, copying records, and printing forms and circulars. The ability of the society to answer these calls being now increased, it becomes less necessary to entertain the question of admitting associate members, upon which the opinions of the Committee are somewhat divided; and indeed the proposition may be regarded as withdrawn by the following reply from the Secretary to the Statistical Committee. Nevertheless we may take this opportunity of recording our opinion that there is no precedent of an association of *paying* members with a branch of the society deputed to a particular object. The "corresponding members" of the Physical Committee, were merely honorary associates without any voice in their proceedings, or any power over their funds. If there be any compliment in the bestowal of such a title, it may be equally just to confer it upon those gentlemen who may lend their co-operation to the Statistical Committee; but we think it would be an inconvenient course, and one of questionable regularity to erect a new class of subscribers to an exclusive object of the Society's labours.

For those who would join the Society in its general views, but whose circumstances prevent their contributing to the extent of ordinary members, an opening already exists in the grade of "*Associate members*" established in 1835.

For the Committee of Papers,

James Prinsep,

29th September, 1837. *Secretary.*

The letter referred to in the above was then read:—

Sir,

I have the honor to acknowledge receipt of your letter dated 7th instant. The explanation given by the President of the Statistical Committee at the last meeting of your Society of the irregularity with which the Committee was chargeable renders it, I trust, unnecessary to do more now, than to express our regret at the occurrence, and to assure you that nothing can be farther from the intention or wish of the Committee than to disconnect its interests from those of the parent Society, or to seek to form any 'associations' which are not likely to prove mutually advantageous and creditable.

As regards the provision which the Society contemplates making for the requisite expences of the Committee and its amount, I have to observe that as this must necessarily bear the most intimate relation to the extent of the Committee's success, it is not for us to specify particularly the degree of assistance, which we may think ourselves justified in claiming from the Society: the sum sought of Government in aid of our labour was 300 rupees per mensem. Whatever limits however the Society may be pleased to assign, the Committee will be careful not to exceed.

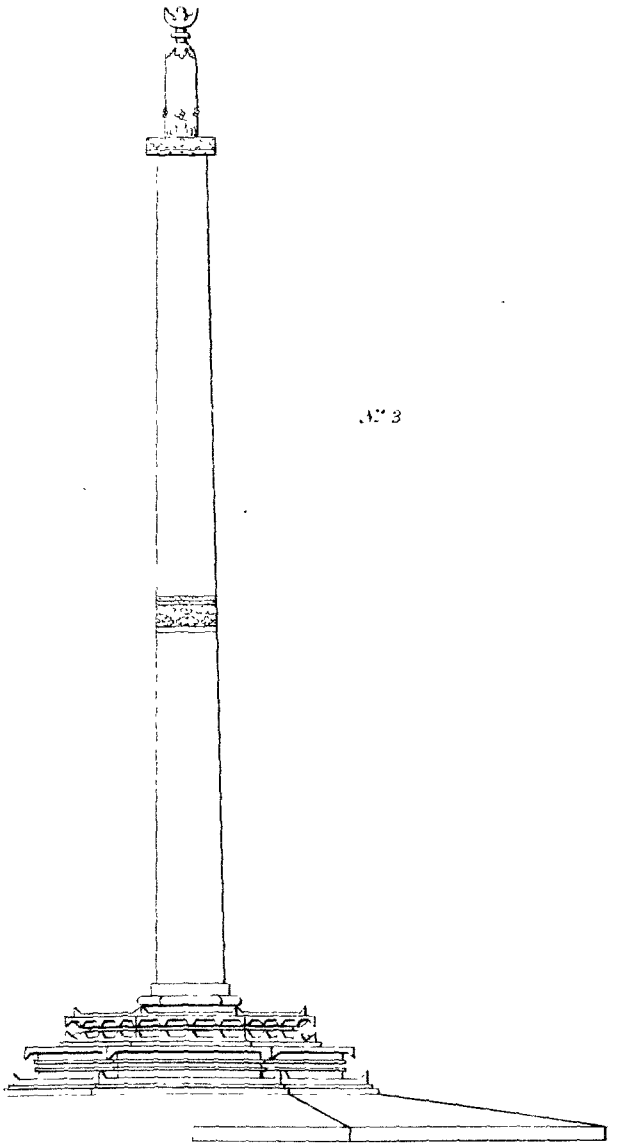
In the distribution of the funds to be placed at the Committee's disposal it is not our intention to entertain any fixed establishment, but to assist individuals engaged in Statistical researches by the occasional services of clerks, and to pay for other works done by contract under the supervision of individual members of the Committee. The accounts will of course be submitted for approval in the usual form.

I have the honor to be, &c.

Calcutta,
28th Sept. 1837. } D. Stewart, M. D.
Secretary to the Statistical Committee.

With regard to the application for funds, it was proposed by the Secretary, and seconded by Mr. Cracroft, and *Resolved*, that five hundred rupees be placed at the disposal of the Statistical Committee.

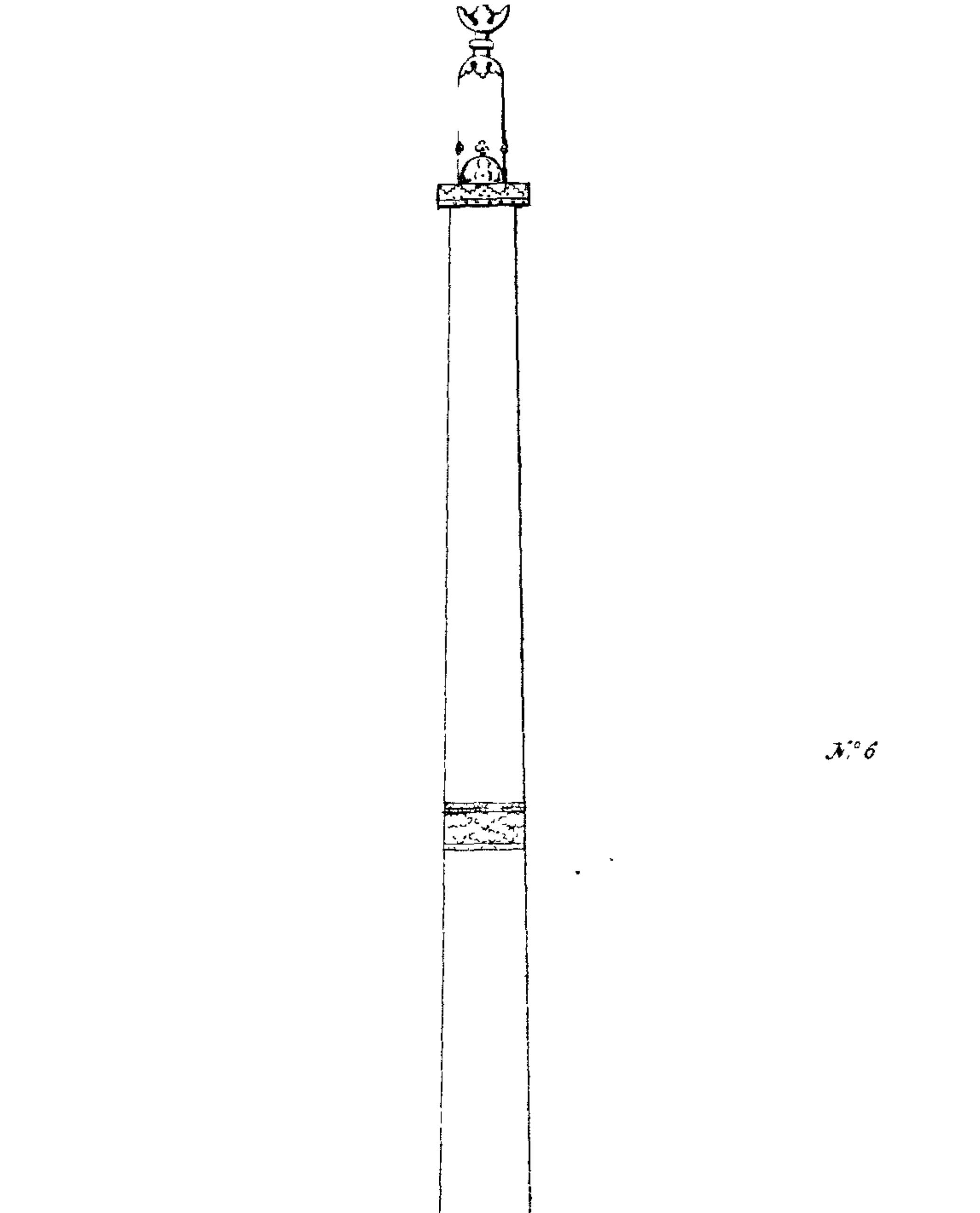
Plans for the
Restoration of the Allahabad Pillar



N.° 3

Capt.n Smiths original Design *Proposed by the Society's Committee*

N.° 6



Capt.n Smith's original Design *Proposed by the Societys Committee*

J. Madge Junr. del.t

Oriental Lith.y Press, Calcutta

The special Committee appointed to select one of the designs for the pedestal of the *Allahabad* column submitted the following

Report.

In compliance with the desire of the Society's Meeting of the 6th instant, as conveyed in your letter to our address of the 8th, we have carefully perused and considered the several papers and designs therewith received, and beg leave to report the result, as follows.

2. All these six designs prepared by Captain EDWARD SMITH of engineers, are so elegant and in such good taste, that it is difficult to determine between them, which may be the most strikingly handsome, and at the same time the most appropriate.

3. Of the more raised and expensive designs Nos. 1, 2 and 6, we would give the preference to the latter, its base being more in character with the pillar, which it is intended to support, than the others, but modified by either a reduced projection, or total omission, of the large upper band, or substituting inverted triangular compartments similar to those at the foot of the pedestal. We would also prefer a direct instead of a curved slope to the lower step, as being more convenient*.

4. Of the less raised designs Nos. 3, 4 and 5, we give a decided preference to No. 3, (see accompanying sketch) as being very light and elegant while it preserves the pure Hindu character in its form and details; moreover in order to relieve it from some of those disadvantages, which form Captain SMITH's principal objections to these latter designs, should No. 3 be ultimately determined on, we would suggest the adoption of the sloping platform as sketched in pencil at the Military Board by Major IRVINE or Captain SANDERS, which we consider to be a very great improvement, the base becoming thereby more on a level with the eye of the beholder.

5. The additional elevation thus given, would amount to two feet, making the upper part of the base from which the pillar will spring, exactly 6 feet from the surface.

6. We observe in the section submitted by Captain SMITH in illustration of his intended mode of fixing the root of the pillar in the stone basement, that he proposes cutting a square hole in the centre and under part of the shaft, about one-third of its diameter, so as to let it down on a square upright stone of the same measurement. This we are apprehensive might not be considered sufficiently stable, and we would suggest in preference that an octagon stone of 6½ feet diameter and 2 feet thick be procured from *Chunar*, and that an opening be cut in its centre, to receive the lower part of the pillar in its entire size, to the depth of one foot. This stone well bedded in good brick masonry, with the aid of the upper stone work judiciously dove-tailed together, would in our opinion give it the utmost stability that could be required. Nevertheless we may safely confide these arrangements to Captain SMITH's well known skill and judgment, should circumstances admit of his undertaking the erection of the pillar, but in case it should fall into other hands the hint may be useful.

7. On the subject of Captain SMITH's proposed new capital and surmounting stone ornament, although we consider the design a very beautiful one, we are unanimously of opinion that it is very desirable to effect the restoration of the original capital and lion, if practicable; if not, we think that the design now submitted may be considered a very appropriate and elegant finish to the pillar.

We have the honor to be, &c.

D. McLEOD,
W. N. FORBES,
W. P. GRANT,
A. CUNNINGHAM.

Fort William,
September 30th, 1837.

Proposed by the Secretary, seconded by Dr. SWINEY, and *Resolved*, that the report be adopted with thanks, and that a copy be communicated to the Military Board.

The Committee of Papers reported favorably on Nawáb TUHAWER JANG's proposal to print the *Sharaya ul Islam*.

* See the accompanying sketch. We confess our preference for the original design as it stands or omitting the upper member.—ED.

Resolved, that the work be printed on joint account with the Nawáb, an advance of 1000 rupees to be made by both parties to the Secretary (account Oriental Publication Fund) to meet the expences.

The Reverend JOHN WILSON, President of the *Bombay* Literary Society solicited the Society's patronage to the *George Nameh*, a Persian epic written by the late MOOLLA FEROZ, and now under publication by his nephew. Referred to the Committee of Papers.

[See advertisement page.]

The President then, in compliance with the resolution of last meeting, rose, the members also standing, and read the following

ADDRESS TO DR. MILL.

The Asiatic Society, to the Reverend W. H. Mill, D. D. Principal of Bishop's College, their Vice-President.

REVEREND SIR,

The intelligence of your intention to return immediately to Europe has been received by us with feelings of deep regret, impressed as we are with the conviction that India is about to sustain, by your departure, a loss which cannot easily be repaired.

It will rest with higher authority than the *Asiatic Society*, to bear witness to the unwearied zeal and fervent piety by which you have been uniformly distinguished in the discharge of the sacred duties committed to your care; but it is peculiarly our privilege to testify, in the most public manner, our sense of the benefit we have derived from your abilities and learning, as well as to convey some parting token of our esteem and respect to a Scholar whose presence among us we have always regarded with feelings of pride and satisfaction.

It is now sixteen years since you arrived in this country. While yet a young man, you had established for yourself a literary reputation of no common order, having excelled on an arena where excellence could have been won only by the united efforts of genius and industry. We hailed your arrival therefore with no ordinary feelings of satisfaction, indulging in the hope that the classical languages and literature of the East would receive from you a share of that attention which had already been so successfully devoted to the learning and science of the West. This hope has since been amply realized.

The Journals of our Society contain abundant evidence of your patient research, of your correct judgment, and of your profound erudition.

Your translation from the Sanskrit of the first part of *Cálidása's Umá*, affords indisputable proof of your skill as a poet and a commentator; while your qualifications as a historian and a philologist have been clearly established by your restoration, with valuable critical and historical notices, of the *Allahabad Inscription*, and by your full and accurate translation of the *Shekhâwatí Inscription* found in the temple of *Harsha* at *Oncha pahár*, and of that discovered at *Bhittri* near *Ghazipore*. In your comments on the Macan Manuscript of the *Alif Leila*, we trace at once the minute accuracy of an experienced critic and the refined taste of an accomplished scholar.

In your Arabic Treatise on Algebra, and in your Hebrew collation of the Psalms in the same language, we have a durable monument of your learning and piety. But the most valuable of your literary undertakings is your Sanskrit Poem, the *Christa Sangita*. In that beautiful work the praises of our Redeemer have been for the first time sung in the sacred language of the *Vedas*. It is your peculiar boast that you have caused the purest doctrines to flow in the stream of this noble language. To the whole body of the learned Hindus you have thus rendered accessible the sublimest truths, by conveying them in a channel to which, as to their own venerated river, they ascribe the power of purifying all it touches. To a mind like yours this must be an inexhaustible source of gratifying reflection.

But, Sir, we feel that we should be doing you an injustice, were we to describe at greater length, the fruits of your studies already before the public. We feel that no conception can be formed of the stores of your capacious mind from the comparatively small samples of your labours which have been given to the world. We feel that to the unobtrusive nature of your character is owing the infrequency of your appearance as an author, and we know that you have assiduously

improved your great faculties;—that your scientific attainments are on the most extended scale;—that as a Hebrew Scholar you were early distinguished;—that your knowledge as a modern Linguist may be said to be universal;—that you are equally familiar with the astronomy of the *Siddhantas*, the mythology of the *Purânas*, and the mystical doctrines of the *Vedas;* while there is no department of the literature and science of Arabia, that has escaped your scrutinizing research.

We trust that, in the leisure of dignified retirement, you will be enabled to put forth the maturer fruits of your rich and highly cultivated mind. We are confident that your well earned reputation will be sustained by whatever you perform; and we are sanguine enough to hope that our country may now boast of possessing an Englishman, the depth and variety of whose oriental studies are not surpassed by any (numerous and distinguished as they are) of the Scholars of the continent.

We cannot allow this opportunity to pass without assuring you of the deep sense of obligation we feel towards you for your unremitting attention to the duties of your station as *Vice-President* of our Society, and for the alacrity with which on all occasions you have afforded us the benefit of your opinion and advice, and the aid of your learning and judgment on the difficult and continually recurring references that have been submitted to our consideration.

We are in some degree consoled for your loss to ourselves by reflecting that, here you have no more to learn:—that though your acquirements are beyond the standard, which is ordinarily reached in the longest and most laborious life, you are yet in the vigor of manhood; and that you are about to return to a land where you will meet with the distinction, which is due to abilities so eminent and to attainments so various.

It is our earnest desire that you will gratify us by sitting for your Portrait as soon after arrival in England as may be convenient to yourself. For the Members of our Society who have the happiness to know you, no token of reminiscence is requisite; but the wish is reasonable that our Hall should be decorated with the resemblance of one, who, while among us, was so useful and so distinguished a Member of our Society.

(Signed) Edward Ryan, *President.*

The Reverend Dr. Mill read the following reply, the President and members still standing.

Mr. President,

The Address which you, in the name of this Society, have done me the high honor of presenting to me, is one which I cannot rise to answer without some feelings of doubt and embarrassment. For I fear to incur the imputation of affected modesty on the one hand,—or on the other, what I would equally wish to avoid, the appearance of slighting in any degree the deliberate judgment of an assembly like this,—were I to give expression to my actual sentiments, on hearing the terms of strong and noble eulogy with which you have dignified my scanty contributions to your learned stores, and the comparatively humble attainments from which those contributions have proceeded. But whatever may be the real value of these labours and attainments,—I feel, and must ever continue to feel, the great obligation which your praise imposes on me, of aiming to resemble as far as I may, that standard of excellence which your too favorable judgment has inferred from the specimens of me already before you. I must ever consider it among the strongest additional incentives to the assiduous cultivation of that knowledge, in promoting which the Asiatic Society has long held so distinguished a place: a cause which I cannot but consider as intimately connected with that of mental improvement and true religion.

I have long been impressed with the conviction that as an accurate knowledge of the intellectual state of any people must precede and accompany all enlightened efforts for their amelioration,—so to attempt that amelioration by appealing entirely to the lower principles of our nature, the love of comforts and luxuries and the like, while we disregard and despise the forms, however imperfect they may be, in which their own ideas of mental and moral elevation are embodied—is to overlook a most essential element in the problem of human improvement,—to slight equally the spiritual and high nature of man, and the history of our

own gradual progress to the eminence we have reached. This would be true, even if the language and literature in which these ideas were incorporated by the natives of this country were far inferior to what they are known and acknowledged to be by the most accomplished spirits of civilized Europe,—the one nearly unrivalled for its powers of combination and expression—the other distinguished by a peculiar grace and tenderness of sentiment, and in the higher flights of speculation into regions where man requires better guidance than his own reason can impart—characterized, even when most tarnished by error, by a singular acuteness and profundity, as well as grandeur of thought. Now if it be a mistake, in matters of religion particularly, to avail ourselves of what is good and just in heathen theology, with a view to its rectification by revealed truth; it is a mistake certainly in which the Apostle of the Gentiles has led the way, as any one may see who observes his appeal not only to the ethical but the theological poetry of heathenism—even when most nearly treading on the verge of that same Pantheistic sentiment which characterizes the theology of heathen India: and if any precedent could be wanted after this inspired authority, we might find it in the course taken by all the great lights of the Church, the BASILS, the CHRYSOSTOMS, the AUGUSTINES,—when the expansive power of Christianity, with much of its primitive fervour, was seen in close and *more equal* juxta-position with the faded yet still conspicuous splendours of Western Gentilism. These considerations (if authority were needed where the reason of the case speaks with sufficient distinctness) had weight with me in the conception of that work which the Society has honored with such distinguished approbation. I am sensible that to conceive and to execute are very different things, and I cannot venture to take to myself all which your kind judgment has been led, perhaps too readily, to transfer from the one to the other: yet I cannot see the manner in which learned natives have received many portions of this work,—I cannot see the unhesitating manner in which their sentiment has been adopted in this assembly, including some whom only the increased complexity of public affairs prevents from marching in equal steps with the COLEBROOKES and the WILSONS of former days,—without satisfaction at the result of the experiment, and hope for the future.

I would not however be thought to limit my interest in the Researches of the Society to matters of this high bearing: for no speculations into either the works of nature, or the monuments of man, are without their proper claim to attention: and just and reasonable as it is to inquire into the solid utility of any pursuit we undertake,—it never appeared to me either wise or worthy to ask at every turn what special usefulness, or bearing on present concerns, may appear in each part or section of the study before us. In science we know that things, which were once thought to be mere food of learned and abstract mathematical speculation, have turned out in the progress of knowledge to subserve the most practical purposes; and with respect to those literary and antiquarian researches, which form the more proper object of this Society,—while nothing that gives us clear knowledge of the history of man and the progress of mind ought to be deemed unimportant by us,—we must remember also that we cannot exactly determine beforehand how far any fragment or morsel of history may conduce to that clear knowledge in the end. In investigating the former history of India, where from the almost total absence of written documents, we must needs proceed by such fragments and morsels,—it is very necessary to bear this in mind. With respect to my own occasional share in these researches,—of which you have made such kind and flattering mention,—I fear that what I have succeeded in deciphering has scarcely adequately repaid the labour bestowed: my own judgment could never admit the idea, which some even of considerable eminence in these pursuits would have led me to entertain as probable, that the classical period of Indian history had been attained: I adopted at length firmly, however reluctantly, the conviction which both internal and external evidence forced upon me, that the monuments in question belonged to a much darker as well as more recent age. A better fortune, as well as a higher merit, has characterised the efforts in the same kind of another Member of the Society now present; whose happy researches on other monuments, conducted under much greater disadvantages in every way than mine, has finally led to a conclusion, which I think all but certainly established, that they belong to

and illustrate a most classical and important part of the history of this country. I beg my friend the Secretary's pardon for talking thus of disadvantages; for it appears almost ungracious to notice what, however enchancing, as it does, the eminent inductive sagacity that he has displayed in his discovery, might seem also to derogate from the universality of his varied and extensive knowledge. I would not have mentioned them—had I not been convinced that he needs but the *will*, if he could find the leisure, to rid himself entirely of them. I know at least that if he could bend his thoughts that way, he needs far less time than most men to add a critical knowledge of the learned languages of the country, so auxiliary to his successful researches in the coins and monuments of India,—to the many other distinguished merits which have made his Journal of our Society, even in his sole portion of it, the object of attention to literary Europe. Of his value as a Secretary, I cannot possibly say more than that he has caused even the loss of the transcendent merits of WILSON to cease to be thought irreparable by us.

My business, however, as I must not forget, is not to express my sense of the merits of other Officers of this Society, (however incidentally forced on my notice in this instance,)—but to acknowledge your kind opinion of myself and to accede thankfully to the proof of it contained in your parting request to me. To be associated in this manner in the remembrance of this Society with its illustrious founder, and the many others whose contributions have conferred ornament and dignity on its proceedings,—is what I cannot suffer even my sense of comparative unworthiness to prevent esteeming a great source of gratification. To you, Mr. President, who have so long added to the duties of your high station in this settlement, a zealous and able administration of the affairs of this Society.—as well as to your colleague in both these respects, of whom, being now absent, (as I regret to perceive,) from illness, I may speak with more freedom,—as one whose distinguished scientific and literary attainments add lustre to his other excellent qualities,—I am well pleased to leave this token of recollection of myself, whose friendship with both was begun in the academic associations of a far different clime from this, in which again I hope we may yet meet. To the other very learned and able Vice-Presidents, and to all, whether countrymen or natives of India, who may be led to take interest in the works you have mentioned with such marked approbation,—I am glad to present, when absent, some memento of my endeavours, such as they are, to instruct or to aid them. Once more, Gentlemen, I thank you for your kind sentiments towards me, and bid you most heartily farewell.

(Signed) W. H. MILL.

Resolved, on the motion of Mr. W. CRACROFT, that the address and the reply be entered in the outcoming volume of the Researches.

The president moved that all farther business be adjourned to the next meeting.

The Secretary however ere he closed his boxes begged to be allowed to mention one subject of their contents, that he could not allow himself to withhold from his friend Dr. MILL, after the warm interest he had just evinced in the progress of the investigations upon which he had lately been engaged. A letter just received from the eminent Pali scholar Mr. TURNOUR gave confirmation the most unequivocal to the supposition just expressed by the learned Vice-President that the *láts* were monuments of the classical age of Indian history. Mr. TURNOUR had proved from an ancient Palí work that PIYADASI was no other than the great ASOKA himself, who reigned paramount over India in the third century before the Christian era. [The communication is printed in a preceding page.]

Neither could he allow himself to sit down on this last opportunity of enjoying Dr. MILL's society without shewing him what would nearly interest him in an equal degree, the fruit of Captain BURNES's researches on the Indus, the first Sanskrit monument we had seen from the neighbourhood of *Kábul*—a transcript of a mutilated inscription from *Húnd*, 20 miles above *Attock*.—Capt. BURNES had left the white marble slab on which it was engraved at *Pesháwer* awaiting the Society's instructions. He hoped by the next meeting to give a further account of it.

The members present then shook hands with Dr. MILL, and the meeting adjourned.

Meteorological Register, kept at the Assay Office Calcutta, for the Month of September, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.			Observations at 4 P. M.							Calculated Humidity.			Register Thermometer extremes.		Rain.		Wind.		Weather.	
	Old stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Old Stand Barometer at 32°.	New Stand Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Cold on roof.	Heat in sun's rays on roof.	On the ground.	At elevation 45 feet.	10 A. M.	4 P. M.	Morning.	Evening.
1	29,542	29,50[illegible]	[illegible]	4,9	3,5	78,4	92	80	82	69	29,454	29,[illegible]	[illegible]7,0	6,4	4,7	75,8	88	73	74	70	78,0		0,10	0,10	N.	N. E.	fine.	fine.
2	,525	,[illegible]	[illegible]	5,6	4,2	77,2	91	78	89	78	,417	,[illegible]	[illegible]4,4	3,1	2,7	79,2	95	85	89	85	N. E. 77,6				N. E.	N. E.	cloudy.	showery.
3	,570	,[illegible]	[illegible]2,0	2,5	2,0	77,3	96	82	91	85	,520	,[illegible]	[illegible]2,7	1,9	2,3	77,8	96	91	91	85	E. 75,0		2,10	2,10	E.	O.	rain. set.	fine.
4	,756	,[illegible]	[illegible]	2,9			94	87	87		,465	,[illegible]	[illegible]3,6	2,9	6,7	77,2	88	90	74	82	74,2		1,65	1,38	S. E.	S. E.	overcast.	do
5	,529	,[illegible]	[illegible]4,9	4,3	4,2	76,0	91	82	80	83	,440	,[illegible]	[illegible]7,7	6,2	5,9	77,1	89	75	76	72	77,0				S. W.	S. W.	cum. stra.	nimbi.
6	,579	,[illegible]	[illegible]4,1	4,0	4,3	75,1	91	83	80	76	,430	,[illegible]	[illegible]7,1	5,5	5,3	76,2	89	78	76	70	77,0		0,13	0,23	S. E.	S. E.	nimbi.	do misty.
7	,538	,[illegible]	[illegible]5,1	1,5	4,2	77,8	91	97	80	79	,421	,[illegible]	6,9	4,1	3,0	77,7	94	82	87	74			0,54	0,54	W.	N. W.	fine.	rain.
8	,540	,[illegible]	[illegible]5,8	4,5	4,5	76,0	91	83	80	71	,444	,[illegible]	6,9	6,7		75,2	87	75	72	60	77,2		0,53	0,52	S. W.	S. E.	cum. stra.	nimbi cldy.
9	,560	,[illegible]	[illegible]5,8	3,2	3,3	79,2	94	86	87	80	,430	,[illegible]	[illegible]9,1	5,4	5,2	77,5	89	78	76	69	77,0		0,38	0,37	N. E.	N. E.	do	do. thunder.
10	,558	,[illegible]	[illegible]5,5	3,1	3,5	78,5	94	86	87	81											77,8		0,40	0,39	N.		fine.	
11	,593	,561	[illegible]5,5	3,4	3,8	78,1	93	85	84	83											78,0		0,56	0,55	S. E.	E.	cloudy.	rain.
12	,709	,[illegible]	[illegible]4,7	3,4	3,4	78,4	93	85	84	82	,497	,[illegible]	3,7	3,3	2,9	78,8	93	85	84	85	78,0		0,81	0,77	S SE.	S.	do	overcast
13	,774	,[illegible]	[illegible]4,7	3,7	3,8	77,0	92	83	82	81	,621	,588	86,2	4,8	4,7	76,4	91	80	80	74	75,8				S. W.	S. W.	fair.	fine.
14	,815	,[illegible]	[illegible]4,9	4,1	4,3	76,2	92	82	82	75	,688	,645	87,9	6,9	7,0	76,0	85	72	68	69	75,0				S. E.	S. W.	cir cum.	do
15	,814	,[illegible]	[illegible]5,3	4,0	4,3	76,4	91	80	80	76	,687	,644	90,1	7,7	8,1	75,0	84	70	66	62	78,9				S.	S.	fine, cum.	do
16											,692	,638	89,7	9,0	8,6	75,0	83	65	65	63	79,8							do
17	,722	,[illegible]	[illegible]4,8	3,6	3,4	78,5	94	85	87	82	,622	,587	87,0	5,2	4,2	77,8	92	79	82	74	78,5		0,10	0,08		S.		do
18	,775	,[illegible]	[illegible]5,5	4,1	3,7	78,8	93	82	84	79	,646	,595	87,7	3,7	3,4	80,4	93	85	84	79	78,0				S.	S. W.	fine, cum.	do
19	,798	,[illegible]	[illegible]5,5	4,5	4,0	77,6	91	81	80	75	,675	,627	92,0	8,8	8,2	77,0	83	67	65	63	78,0				S. W.	S. W.	cumul, cir.	do
20	,820	,[illegible]	[illegible]4,4	4,7	4,8	79,0	90	80	78	80	,706	,653	90,3	9,3	9,6	75,7	79	79	74	70	79,8				S. W.	S. W.	do fine.	cir cum.
21	,839	,[illegible]	[illegible]4,6	4,9	5,4	78,1	90	80	78	77	,720	,669	93,0	10,7	10,1	75,7	78	65	57	63	79,2				S.	S. W.	cum do.	fine.
22	,887	,[illegible]	[illegible]3,5	5,5	6,1	77,0	87	72	72	75	,766	,720	88,7	7,0	7,9	77,0	85	72	68	70	74,8				S.	S. E.	do stra.	do.
23	,871	,[illegible]	[illegible]5,5	3,2	4,9	77,4	89	85	76	77	,735	,693	91,3	7,6	7,2	78,7	85	70	68	66					S.	S.	do	nimbi.
24	,852	,[illegible]	[illegible]4,9	6,5	6,2	76,4	87	72	72	74	,718	,656	91,4	11,0	10,2	75,5	80	59	59	60	73,5		0,78	0,71	S.	S.	clouds, hazy.	cumuli.
25	,890	,[illegible]	[illegible]5,5	6,5	6,8	76,0	86	72	70	73	,703	,656	84,4	5,8	4,1	78,8	88	75	74	81	79,2		0,57	0,51	S. W.	S. W.	cum, fine.	do. fine.
26	,780	,741	[illegible]5,7	5,1	5,6	75,0	89	77	76	71	,703	,658	85,3	5,0	4,3	76,7	89	75	76	76	71,8		0,07	0,07	S. W.	S. E	cum stra.	rain thunder.
27	,820	,803	[illegible]4,9	4,3	4,4	78,3	90	81	78	80	,719	,679	90,9	9,7	10,3	75,4	81	63	61	67	74,8				S.	S. E.	fine cum.	showery.
28	,845	,807	86,5	4,0	4,8	77,7	89	80	76	75	,687	,653	92,9	10,2	9,5	73,9	79	62	57	55	77,8				N. W.	E.	cumul, cir.	fine.
29	,836	,798	83,8	4,3	4,6	76,0	91	82	80	79	,735	,691	87,1	5,9	4,1	78,0	87	76	72	75	75,0		0,36	0,35	N. E.	N. E.	do	do
30	,829	,787	86,3	5,3	6,2	75,6	86	77	70	79	,746	,675	89,0	7,4	7,0	76,6	85	70	68	67	74,3				S. W.	S. O.	fine.	thunder
																									N. E.	S. E.	cumuli.	cloudy.
Mean.	29,713	29,678	85,3	4,2	4,4	77,2	91	81	80	77	29,613	29,568	88,2	6,4	6,1	76,8	87	74	72	70	76,6		9,10	8,67	Southerly		Rain.	

On the 27th at 7h. P. M. a brilliant meteor was seen at Calcutta—it proceeded from near the polar star towards the north-east. On the 28th a water spout was seen on the salt-water lake.

JOURNAL

OF

THE ASIATIC SOCIETY.

No. 70.—October, 1837.

I.—*Extracts from the* MOHIT *(the Ocean), a Turkish work on Navigation in the Indian Seas. Translated and Communicated by* JOSEPH VON HAMMER, *Baron* PURGSTALL, *Aulic Counsellor, and Prof. Orient. Lang. at Vienna, Hon. Memb. As. Soc. &c. &c.*

[Continued from Vol. V. p. 468.]

TENTH CHAPTER*.

I. *Of certain truths founded on reason and experience; and of hurricanes (Tufán,* τυφων).

Be it known that the science of navigation is founded on reason and experience; every thing which agrees with both is certain; if you ask which certitude is greater, that of reason or that of experience, we answer that this is sometimes the case with reason and sometimes with experience; the *dair*[1] that is to say the courses[2] and monsoons are more known by experience; but the knowledge of the celestial signs, the arithmetic rules, the *ighzár*[3], and *irqáq*[4], that is to say, the knowledge whether you must keep the sea or steer towards the land, and what belongs to it, is all dependent on reasoning; again the measures and distances are all founded on experience and on reason conjointly; but the calculated courses[5], or rather the regulated tracks[6]

[1] دایر (written) دیر [2] طرق [3] اغزار [4] ارقاق [5] مجاري محسوبة [6] طرق معدودة

* We have endeavoured as before to meet the illustrious translator's object in favoring us with the continuation of this curious work, by tracing out the places alluded to, and affording such other illustrations as our position in India permits. A copy of the last edition of HORSBURGH containing the latest labors of our Indian marine surveyors, for which we are indebted to Mr. GREENLAW, has been of much use. Most of the native names on the coasts of Arabia, &c. are carefully noted by the Bombay officers.—ED.

are taken from the usual voyages of the ports, that is to say, the results of calculations and distances are the foundations[7]; if the foundations be certain the results are also certain, and if the foundations are false the results be the same. Be it known to you that you must get the knowledge of each place from its inhabitants, which is more certain than the knowledge acquired from strangers, but if the last be men of experience and seafaring people, consult and consider also their information; if the knowledge of the inhabitants be small, and that of the others is well ascertained, the latter is of course more to be relied on.

Of accidents to be taken care of, and of hurricanes[8].

The masters of the Indian seas count ten things to be guarded against[9].

1. Be on your guard against seeing *Socotora* at the end of the monsoon, because in that is much fear[10].

2. Be on your guard against seeing *Ghubbei' benna*[11]* on the 130th day of the Yazdajirdian year, answering to the 360 of the Julálian, (6th March)†; be also on your guard against seeing *Ghubbei Hálole*[12] which is on the south side of *Háfá*[13]‡.

3. Against seeing *Fartak*[14]§ on the 130th day of the Yazdajird. year = 360 Julál. (6th March) if you sail for Yamen; because in some places the Indian flood is very strong, particularly with a northerly wind. Be it known to you that on the 110th day of the Yazdj. year =340 Jul. (14th Feb.) *Fartak* remains on the north.

4. From the 10th of the Yazdj. year (7th Nov.) up to the 80th (15th Jan.) that is to say, from the 240, to the 310 Jul. not to fall

امهات [7] طوفان [8] محزورات [9] خوف در [10] زیادة [11] غبة بنه [12] غبة هالوله [13] حافو [14] فرتك

* Quere *Ghabbai-tin* of the 21st voyage from *Diu* to *Maskát*: see vol. V. p. 462, supposed to be near Cape Isolette; *Ghabba* may mean a round or hollow place as a *gulph* or *cove*: *Kubha* or *Gubbha* of the Páli or Sindhu?—Ed.

† We have added the English dates adapted to the author's period (1553) making the Yazdajirdian year commence on the 28th Oct. and the Julálian on the 11th March. To adapt the observations to the present date, 10 days more should be added.—Ed.

‡ *Ras Hafoon* or *Cape Orfric* of Horsburgh, on the *African* coast, lat. 10° 22′, long. 51° 16′ south of *Guardafui*; "between *Ras Mabber* and this cape lies a deep circular rock-bound bay (doubtless the one here pointed out as *Halula*) in which some of the Egyptian expedition were lost.—*India Directory*, I. 258.—Ed.

§ *Cape Fartash* of the maps, N. E. of *Kisseen* on the south coast of Arabia. One Arabian whom we consulted, doubted whether the meaning was not rather that the hatches, (in Hindi *phatta* or *phátak* or gate) should be closely shut as the sea ran very high at that season.—Ed.

towards the south, particularly with great ships and if you are sailing for *Maskát* and *Hormúz*.

5. If on the days on which the wind is blowing at *kawas*[15]* the cape *Yabas*[16] and cape *Sárek*[17] are at hand†, guard against passing to the Arabic coast because it is impossible to make after it any other land but the coast of *Mekrán*.

6. If you wish to reach *Malacca* guard against seeing *Jámas feleh*[18] because the mountains *Jebál Lámeri*[19]‡ advance into the sea, and the flood is there very strong.

7. Be on your guard against seeing on the 90th (25th Jan.) or 200th (15th May) day of the Yazd. 55 or 65 Jul. year from *Gujerát*, *Furmiún*[20] and its districts exist *Somenát* and *Gúlinár*[21]§; in seeing the last there is no harm.

8. Be on your guard against being neglectful during the course in the sea of *Kolzum*‖, that is to say, in the Arabic gulph, which is that of *Hejáz* and *Jedda*, because the two shores are very near.

9. Be on your guard against neglect in vicinity of the shore; generally you must be on your guard against seeing coasts of any description.

10. Take care to muster on each voyage all your instruments and stores, be it masts, rudders, yards: if the wind be strong shorten your sails, particularly at night, if the sky be clouded, windy, rainy; be on your guard against incurring damage.

Besides these ten *Mahzúrát*[22], that is, things to be guarded against or to be taken care of, there are also some others which seafaring people must pay attention to. First the circle of the constellation [23]*Nejam ez-zauji*, which the Indians call, the constellation of the *Jogni*, and which by the astronomers of *India*, *China*, *Turkistán* and *Kiptshak* is

[15] كوس [16] راس يدس [17] راس سارق [18] جامس فله
[19] جبال لامرى [20] فورميان [21] كولي نار [22] محزورات [23] نجم الزوجي

* By *kawas* or *kaus*, is generally understood south, perhaps the south-west monsoon.—Ed.

† *Rasul yabas* is one of the projecting headlands south of *Rás ul had*, whence the monsoon would easily take a vessel across to the *Mukrán* coast. It is called *Jibsh* in Horsburgh (I. 314). *Rasul Sárek* is perhaps another of the promontories here—the nearest in name is *Ras ul Sair* farther down the coast near *Djobar*.

‡ *Jámas*, *feleh* must be the *Pulo Anzas* or *Mudancoos* of Horsburgh, two islands lying on the verge of a shoal dangerous of approach on the *Malacca* coast, where Pulo *Loomant* (the *Lameri* of our author) stretches out beneath Parcelar hill. The set of the flood tide here is particularly noticed by the Indian marine surveyors.—*Directory*, II. 226.

§ *Meeánee*, *Somnáth* and *Kouréenar* (or *Girnar ?*) of the maps.

‖ *Kulzum* signifies the great ocean, but it is applied here to the Red Sea.

called that of the eight stars. They fancy it to be like a drunken camel which is roaming every day in a different direction. For example, on the 1, 11, and 21 of the Turkish month it appears in the east; on the 2, 12, and 22 between east and south in the point of compass which the Turkish mariners call *Kashishlama*[24] (S. E.); on the 3, 13, 23, it is seen on the south; on the 4, 14, 24, on the point *Lados*[25] S. W.; on the 5, 15, 25, it is seen on the west; on the 6, 16, 26 between west and north, on the point of compass called *Karayal*[26] N. W.; on the 7, 17, 27, it is seen on the north; on the 8, 18, 28 between north and east on the point of the compass called *Boreas*[27] N. E.; on the 9, 19, 29 it is underneath the earth; on the 10, 20, 30, above it. It should be remembered that the beginning of the Turkish month is not from the sight of the crescent, but from the meeting of sun and moon (or true conjunction) which happens sometimes one and sometimes two days before the first of the Arabic month (the beginning of which is calculated from the sight of the new moon): if you know this take care not to undertake a voyage on that very same day of the conjunction of sun and moon; the masters of the Indian seas are particularly careful about it.

Of the circle of the men of the mystic world[28]*.

Shekh Mohiyuddi'n ul-Arabi' has fixed the places in which the men of the mystic world are to be found on each day of the month;

رجال غائب[28] بوریاس[27] قرڤیل[26] لدرس[25] کششلمه[24]

* It might be supposed that the two separate superstitions described by Sidi Ali were merely different versions of the same story; for the Indian *yoginí* योगिनी, or wandering fairy which he states to be the same as the *najm u'zojí* or circle of the constellations, is by all other authors identified with the *rijál ul ghaeb* or invisible beings. The positions of the *yoginí* however correspond only with the latter; and I am assured by a Persian friend that the Turkish 'starry circle,' called also *sakés yaldaz* is quite distinct from the other: he points it out in the constellation of Cassiopeia, to one of the stars of which he gives the name of *náqeh* or camel. (See Obs. on Arabic Compass, vol. V. p. 792.)

This constellation being situated as near the pole as Ursa major will be seen, in northern latitudes, like the latter performing a complete circuit round the pole; whence probably has arisen the fable of both their wanderings, but though the circuit will be repeated in 24 hours nearly, it can have no reference whatever to the moon's revolutions.

In Dr. Herklot's *Qanoon-e-Islám*, page 395, will be found a full explanation with diagrams of the mode of finding the lucky and unlucky aspects as practised by the Musalmáns, who merely regard the *day* of the new moon, not the exact time of conjunction, and have further adopted a fixed scale of positions for the days of the week. But to exhibit the orthodox version

viz. on the 7, 14, 22, 29, they are in the east; on the 4, 12, 19, 27, in the west; on the 3, 15, 23, 30, they dwell in the north; on the 8, 11, 18, 25, they stay to the south; on the 6, 21, 28, between north and east (N. E.); on the 4, 5, 13, 20, between north and west (N. W.); on the 2, 10, 17, 25, between south and west (S. W.); on the 7, 16, 24, between south and east (S. E.) This being known you must not steer in that direction, and if you engage at sea for battle you must be backed by the men of the mystic world; take care not to fight in a direction against them: and perform, with the face turned towards them, the following prayer:

"Greeting to you, O men of the mystic world; O holy spirits; O ye selected ones[1]; O ye liberal ones[2]; O ye vigilant ones[3]; O ye wanton ones[4]; O ye pale ones[5]; O ye insurers[6]; O you pole[7]; O ye singular ones[8]; O ye guardians[9]; O you who are the best of God's creatures, aid

[1] امنا [2] نقبا [3] نجبا [4] رقبا [5] بُد [6] اوتاد [7] قطب [8] افراد [9] امنا

according to the Hindus I have extracted, from an astronomical work called the समयप्रदीप *samaya-pradipa*, by HARIHAR A'CHA'RYA, the following account of the stations occupied by the *yogini* at different times.

पूर्व्वे चन्द्र नवाङ्किते ऋतवहे रामः स्मरारिर्यमे पञ्चम्या सहित स्त्रयो दशतिथि र्नैऋत्यके द्वादशी वेदस्यापि जलाधिपे भुवनषट् वायौतथा पूर्णिमा षष्ठ्याख्याच धनाधिपे ऽचि दशमी दर्शाष्टकौशङ्करे ॥

योगिनो वामतः पश्चात गच्छतः शुभकारिणी।
दक्षिणे पुरतोवापिनशुभेति विदुर्बुधाः॥

1 9 3 11 5 13
Purvvè chandra navánkite hutavahe ráma: smarárir yamé panchamyá sahitastra
12 4 14 6
yodasatithir nairrítyakè dwádasí vedasyápi jaláilhipe bhuwana shaṭ váyau tathá
15 7 2 10 30 8
purnimá shashthyákhyá cha dhanádhipé akshi dasami darsáshtakausankarè.

Yogini vámaták paschát gachchhatah subhakáriní,
Dakshiné puratovápi nasubheti vidur budhá.

"(The *yogini*) remains in the east on the 1st and 9th *tithi* or lunar days (of each *paksha* or semilunation): in the south-east (*agni*) on the 3rd and 11th: in the south (*yama*) on the 5th and 13th; in the south-west (*alakhi*) on the 4th and 12th: in the west (*jaladhipa*) on the 6th and 14th: in the north-west (*vayu*) on the 7th and 15th: in the north (*kuvera*) the 2nd and 10th: and in the north-east (*Isána*) on the 8th and 30th *tithis*.

"Whoever goes on a journey does well to keep the *yogini* on his left or behind him. To place it in the south or in front when going, is accounted unlucky by the pandits."

HUNTER's Hindustáni dictionary informs us in addition to the above, that his (or her) influence is exercised especially during the 9 *gharis*, (or 3 hours 36 minutes) at the close of each *tithi* or lunar day, which latter is reckoned not like the civil day but as a thirtieth part of the actual lunation, so as to make it a

me by your aid; pity me by your pity; help me with your help; look on me with your look; obtain for me my wishes and purposes; provide for my wants: facilitate my petitions with God in truth, and with man in appearance, by the grace of the lord of apostles, and the favour of the pious Mohammed on whom be peace in this world and in the next." Some say that this prayer is to be repeated 366 times.

Besides this you must take care not to navigate on the unfortunate days of the year which are the 12 of *Moharrem*, 10 of *Safer*, 4 of *Rabi-ul-awal*, 28 of *Rabi-us-sáni*, 26 of *Jamázi-ul-awal*, 12 of *Jamázi-sáni*, 12 of *Rajjab*, 26 of *Shaabán*, 24 of *Ramadhán*, 8 of *Shawwál*, 18 of *Zilkaada*, 8 of *Zilhija*, and the last Wednesday of the year, called the sharp Wednesday*.

Take also particular care not to navigate when the moon is in the *Scorpion*, and in the burnt days[10], that is to say, when the moon is in the constellation of *Libra* from the 19th degree of it till to the fourth of *Scorpion*; but if the moon be actually in the constellation of *Scorpion* the evils attending it belong but to journeys on land; and this time is, on the contrary, a blessed one for voyages at sea. This is written in the ephemerides of Arabic astronomers; they have fixed for each of the seven planets a day and a night of the week; for the sun, *Sunday*; for the moon, *Monday*; for Mars, *Tuesday*; for Mercury, *Wednesday*; for Jupiter, *Thursday*; for Venus, *Friday*; for Saturn, *Saturday*. As to the nights they are under the influence of planets as follows: the night

[10] ايام محترقة

work of some calculation to discover the precise position at any given period. The Hindus still put implicit faith in these astrological absurdities, and the Musalmáns still imitate them in commencing no great undertaking without previous determination of an auspicious moment.—Ed.

The best account (however imperfect) hitherto given by European travellers of the *men* of the mystic world is in Mr. Lane's most excellent work on the manners and customs of the modern Egyptians.—H.

* The greatest possible latitude prevails as to these evil days, Herklot says on one authority, that there are 7 in each month, again on another, that there are two, but neither agreeing with these enumerated by Sidi. The *Ajáib ul Makhlukát* contains another list of fortunate days, giving all but unlucky Wednesday (which Herklots however deems lucky) credit for some good quality—Friday, for cutting nails; Saturday, because any thing born on it will outlive a week; Sunday, because creation commenced thereon; Monday for journeys; Tuesday, for bathing and shaving;—Thursday for undertakings;—but Wednesday, black Wednesday, is fit for nothing but taking medicine! The last Wednesday of *Safar* called *ákhiri chárshamba* is esteemed the most unlucky of days in the year.

Of the months, according to the same authority the following months only are unlucky, *Safar* and *Rabi-us-sáni*, all the rest are fortunate, *Rajab* and *Ramzán* being particularly so.—Ed.

of Sunday belongs to *Mercury*, that of Monday to *Jupiter*, that of Tuesday to *Venus*, that of Wednesday, to *Saturnus*, that of Thursday to *Sol*, that of Friday to *Luna*, that of Saturday to *Mars*. They have divided each day and night into twelve hours, and given to each of them a planet. To find the names of these you must take the final letters of them, and the initials of the days and hours beginning with Sunday, and with the night of Sunday.

For example, you add to the letter[11] *(surkh-dehal)* intended for the days; those of *(dehal-surkh)* [12] intended for the nights: that is to say, the first hour of Sunday belongs to Sol, the second to Venus, the third to Mercury, the fourth to Luna, the fifth to Saturn, the sixth to Jupiter, the seventh to Mars, the eighth to Sol, the ninth to Venus, the tenth to Mercury, the eleventh to Luna, the twelfth to Saturnus. The first hour of the night of Sunday belongs to Mercury, the second to Luna, the third to Saturnus, the fourth to Jupiter, the fifth to Mars, the sixth to Sol, the seventh to Venus, the eighth to Mercury, the ninth to Luna, the tenth to Saturnus, the eleventh to Jupiter, the twelfth to Mars; the hours of the other days are to be made out in the same way. As soon as you know the planet of the hour, you know also in what hours you may put to sea, and in which not. By no means in the hour of Saturnus which is unfortunate, but by all means in that of Jupiter, which is fortunate; not in those of Mars and Sol but in those of Luna and Venus and Mercury.

Some men of talent have comprised the rules of the days of the week, on which navigation is to be undertaken in the following Persian verses:

سوی مشرق دوشنبه نروی ای برادر من به
آنکه از مغرب آورد کینه روز یکشنبه است و آذینه
روز سه‌شنبه و چهار بغال نروی زنهار شمال
پنج‌شنبه چوسر برآرد خور رفت خود جانب جنوب مبر

"On *Saturday* and *Monday* not to sail,
O brother, to the East is sure the best.
Sunday and *Friday*, are the day which bring,
Resentful, many evils from the west.
On *Tuesday* and on *Wednesday*, to the north.
Don't go; take care, it is of no avail;
And on a *Thursday* when the sun is rising,
T'wards the south, I beg you'll never sail."

It has been already mentioned that the tract of sky which is between the point of sunrise and north is called *East*, that between

[11] سرخ دیهل [12] دیهل سرخ

the point of sunset and south is called *West*, that between the point of east and west is called *North*, and on the opposite side *South*. Consider all this when you undertake a voyage ; when, please God, he will make every thing easy to you and your voyage shall be attended with much profit.

Be it known to you that the most dangerous *Tufáns* or storms in India are five. The first begins in India on the 310th day of the Yazdajirdian year,—175th Jul. (1st Sept.) which is called the rein of the elephant. The second is that of *Ohaimer*[13] on the shore of *Ahkáf* from the district of *Madaraka*[14]* reaching to *Sheher*[15], and in some parts to *Aden ;* it sets in on the 315th day of the Yazd. = 215 Jul. year (6th Sept.) ; in some years earlier, in some years later.

The third is called that of the forty (*Erbaain*), in the sea of *Hormúz*, it begins on the 50th day of the Yazdajird. year = the 280 Julál. (15th Dec.)

The Fourth that of the girls *(Benát)*, known by the name of *winterly wind*[16] ; it sets in from the very place of the *Binát-ul-naash*[17] (the three stars of *Ursa*), and extends nearly to Aden over the whole Arabian continent ; in some years it does not reach Aden : it begins on the 50th day of the Yazdj. year, (15th Dec.) and ends on the new year's day, that is to say, from the 280th to 330th day of the Julálian year, (5th Feb.)

The fifth is that of the ninety (*Tisain*), in the Indian seas ; it sets some years earlier and some years later in ; this *Tufán* extends also to the continent of *Ahkáf* where it comes from *Barr mo*[18], that is to say, from the shore, the people of *Mahr*[19] call it *Shalli*†[20], and the sea is under the wind ; it lasts till to the 190th day of the Yazdajirdian year=the 55th of the Julálian, (4th May :) this is the strongest of all, and extends, if powerful, over the whole world.

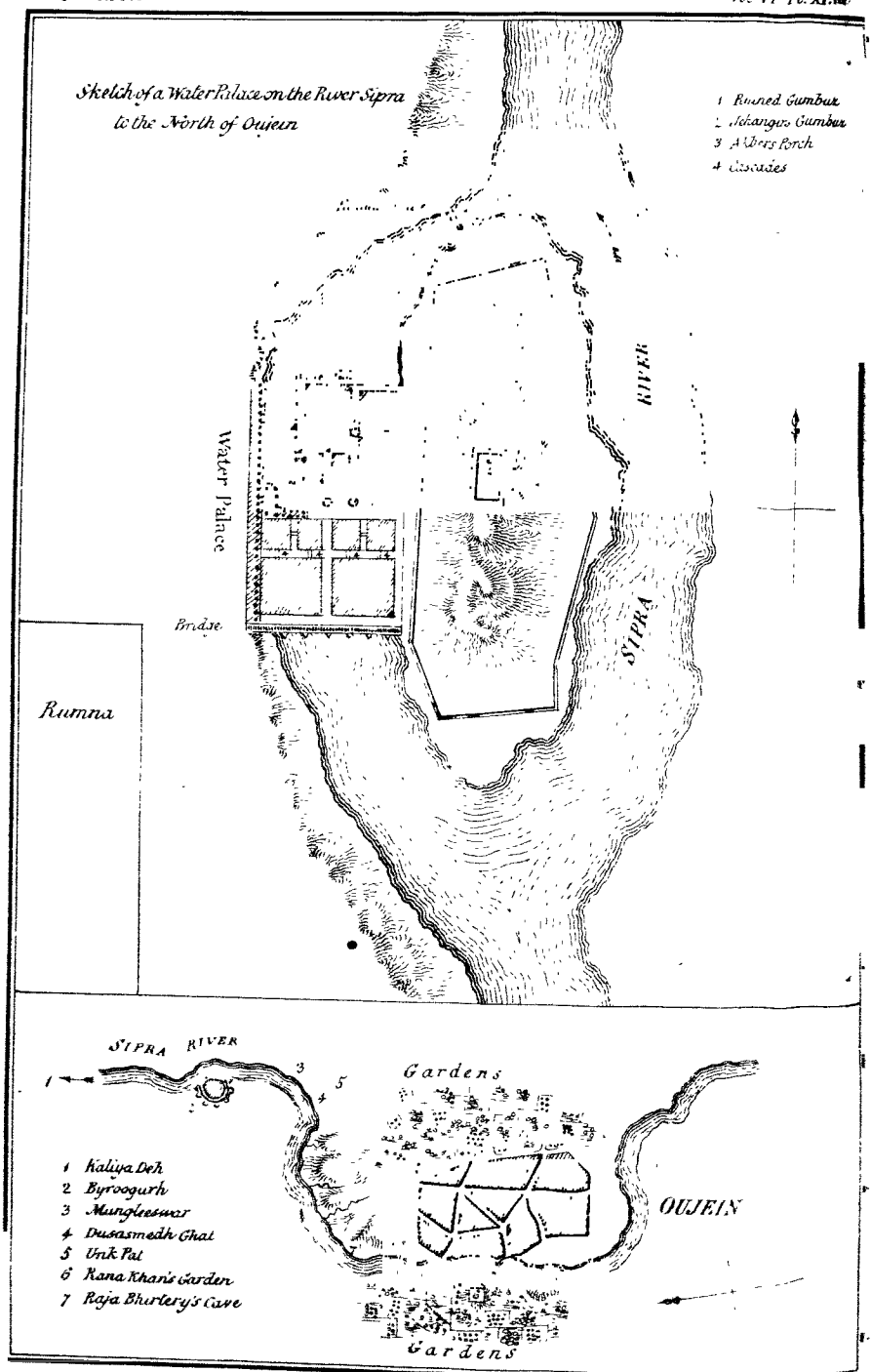
Finished, by the providence of God the omniscient, in the town of *Ahmedábád* the capital of *Gujurát*, in the last days of Moharram 962 (end of December 1554) of the Hejra. Written in the last days of *Rabi-ul-awal* 966, (end of December 1558,) in the town of *Amid*.

برمل [18] بنات النعاش [17] ريم مشتا [16] شهر [15] مدركه [14] اوحيمر [13]

شلى [20] مهر [19]

* *Ras Madraka* is, I find by Horsburgh, Cape Isolette, which I before supposed to be *Ghaibba-i-tin* : the latter may be the rocky bay near it.—Ed.

† *Mahrastra* and *Chola* of the west coast, or more probably *Maiawa* and *Chola* which with *Karnata* were the most influential states of the peninsula until the 16th century, when they succumbed to the *Vijyanagar* princes.—Ed.


Skelch of a Water Palace on the River Sipra
to the North of Oujein
1 Ruined Gumbur
2 Jehangurs Gumbur
3 Akbers Porch
4 Cascades
Water Palace
RIVER
SIPRA
Bridge.
Rumna
SIPRA RIVER
Gardens
OUJEIN
Gardens
1 Kaliya Deh
2 Byroogurh
3 Mungleswar
4 Dusasmedh Ghat
5 Unk Pat
6 Rana Khan's Garden
7 Raja Bhurtery's Cave

II.—*Observations upon the past and present condition of Oujein or Ujjayani. By Lieutenant* EDWARD CONOLLY, *6th Light Cavalry.*

Having lately had an opportunity of paying a visit to this ancient city, where I endeavoured, as far as a few days would allow, to explore the various buildings and temples within its precincts, collecting specimens, papers, antique coins, and inquiring into points of history and superstition, it has occurred to me that I may be able to add something to the hitherto meagre and faulty descriptions published of this celebrated place.

European visitors to *Oujein* generally first hasten to the water-palace. In my survey of the town and its environs therefore this will be a convenient spot from which to begin my observations*.

Five miles north of the city, the *Sipra* running due north separates into two channels, and surrounds an oval-shaped rocky eminence of about five or six hundred yards in circumference. The island thus formed, which a now dilapidated wall encloses, is crowned with a clumsy, rudely fashioned palace, the architect of which preferred solidity to elegance; for the rough blocks of trap composing the walls have no carving or ornament save where some isolated stone shews, by its sculptured figures, that it once adorned a more ancient edifice†.

Two solid bridges, at either extremity of the island connect it with the left bank of the river. The one to the north where the bed of the stream is more narrow and the rush of the water more violent, has with the exception of one or two tottering arches been swept away. The other seems to defy time and the elements. From this last the water works commence. The floor of every arch has been faced with masonry and a narrow canal, cut into the centre of each, alone affords a passage for the water in the dry weather. The bed of the left stream (its whole breadth) for more than a hundred yards to the north of the bridge, has been similarly levelled and chunamed. The water, stealing gently through narrow and sometimes fancifully shaped conduits, feeds in its course numerous square tanks, shivers over carved purdahs a yard high, and at length united in a larger reservoir, tum-

* HUNTER notices this place, As. Res. vol. VI. FORBES devotes a few lines to it. Sir W. MALET published a paper upon *Kaliya deh* in the Oriental Repository, a work I have not been able to procure.

† For the palace see HUNTER;—a few of the doorways and cornices are however faced with less common material. I noticed a reddish-brown porphyry, (Spec. 1,) a yellowish-brown porphyrytic sandstone, (Spec. 2,) a spotted do. (Spec. 3.,) and a handsome red stone, old red sandstone, (Spec. 4.,) all these I was told are from *Rampoora*. (The numbers refer to specimens forwarded.)

bles with a fall of perhaps 20 feet, over a perpendicular wall of masonry, into its natural bed. Pucka walks separate the tanks from each other, and in the centre, one broader than the rest cuts across from bank to bank, dividing as it were the works into two squares. The right bank (of the left stream) by a singular neglect and want of taste presents only its natural rude face of black and broken earth, whereas it afforded, by its gentle slope up to the palace, an excellent base for a terraced ghát.—The left bank has been more favored, an arcade lines it which opens to the river, and whose flat and pucka roof is on a level with the top of the bank. The domed chamber contained between each arch occupies about fourteen square feet. From the central chambers a second arched way projects, giving this part of the building a double width*. Two tanks occupy the outer, and spread a delightful coolness through the interior, apartment. At a little distance from the left bank four high stone walls enclose a space whose circuit is about three miles. It was probably once a *rumna* or garden.

All these buildings are of trap, the material of most of the temples and walls of *Oujein*, and which is quarried in a range of hills three miles W. N. W. of the city. The assertion of Hunter that this range is granite must have been a slip of the pen, for the step-like sides and tabular top betray its composition from a distance, and granite is quite unknown to *Oujein*. The range also extends only two and not seven miles as Hunter writes†, which seems to indicate some indistinctness in the MSS. at this place. The stone quarried here, and generally for building throughout South *Malwa* differs in no respect from the common trap of the *Vindhya*, except that being less interseamed with quartz it affords a convenient material for the chisel. The hills from which it is extracted do not furnish that variety of geodes, zeolites and calcareous minerals which are spread in such profusion over the ranges near *Mhow*, and the only amygdaloid I could detect on the *Oujein* hill seemed merely decomposed trap, its cells lined with green earth but containing no crystals‡.

To return to the water-palace. The works above described are so solid, and the chunam so excellent, that the water which annually

* See the plan. The two sketches 1 and 2 which accompany this paper have no pretensions to minute accuracy. They are in some degree drawn from recollection and are merely explanatory of the text.—I am indebted for them to the kindness of Lieutenent Kewney, D. A. S. M. G.

† A similar range lies to the south not far distant, but with a different elevation.

‡ The sun was however so hot, and I was so unwell that I could not stay to dig.

covers them has committed but little injury, and the edges of the greater part of the *kunds* and canals are unbroken and even sharp. Two or three of the north chambers of the arcade cannot indeed be entered, the deposit of the river having choked them up, and *kahi* (of which I know not the classical name) disfigures a few of the tanks, but a trifling expenditure of time and money would restore its original beauty to the place. Indeed the water-palace may perhaps be said to have received more injury from friends than enemies, from innovation than neglect, for as Sadi expresses it:

هر که آمد عمارت نو ساخت رفت و منزل بدیگری پرداخت
وان دگر پخت همچنان هوسي وین عمارت بسر نبرد کسي

"Every one who came erected a new fabric. He departed and evacuated the tenement for another, and this in like manner formed new schemes. But no one ever finished the building."

More fully to explain my meaning, it will be necessary to premise that a very cursory view of the buildings detects them to have been the work of neither one architect nor one age. The palace on the island was evidently erected on the site and with the fragments of a Hindu temple, dedicated doubtless to some form of *Vishnu*. The debris of ruined fabrics are largely used in every stone wall near *Oujein*, but here the robbery has been more extensive, and many of the dislocated stones betray by the similarity of the patterns figured on them, that they were once united in a more honorable place.

Kaliya-deh, the serpent's haunt, seems a name borrowed from that of the kund in the Jumna at *Muttra*, whose waters were poisoned by a serpent. It was thou "Oh Krishna, who slewest the venom-breathing *Kaliya**." In confirmation of this on a large and conspicuous slab stuck into the wall of the island I observed an excellently sculptured representation of Krishna blowing the flute, while eight petticoated gopís are playing on different instruments or dancing about him.

The practice of giving to favourite spots the names of celebrated foreign sacred places, is common at *Oujein* and elsewhere. By this simple process, the Hindu thinks to concentrate a quantity of holiness into a small space, and needy, feeble, or business-bound piety indulges in the plausible consolation of worshipping at home and at ease, the objects of a difficult or expensive pilgrimage.

The palace and wall of the island, the bridges and wall of the enclosure, I suspect to have been the first buildings erected here by Musalmáns; assigning a later date to the water-works: for the front

* Thus Jayadeva addresses Krishna.

wall of the palace and of the island, those which face the long side of the wall are parallel; but these walls are not parallel to the banks which confine the water-works, so that the last when viewed from the palace have an unpleasing appearance of crookedness. One architect would hardly have thus distorted his work. It was so easy to have built all straight at first; but it was not so easy to make the bank square to the palace already erected. The style too of the supposed earlier buildings seems to me more rude and in a different taste to that of the rest: but on this point I may be mistaken. The following inscription gives us the date of the first (according to my *theory*), Musalmán buildings, A. D. 1457.

Inscription outside the building, No. 1 *of the sketch.—Date* 1008 *H.* 1599 *A. D.*

بتاریخ سنه ۴۴ سال الهي موافق سنه ۱۰۰۸ که رایات ظفر آیات
عزم تسخیر دکن کرد بایذجا عبور افتاد نامی زمانك دوش دلم
کرد سوال کز رفتهٔ و آینده بیان کن احوال * گفتا (چه خبر
ز رفتگان) نیست اثر آینده چو رفته و آن چه میپرسي حال
راقمهٔ محمد معصوم نامي البکري *

We owe them therefore to the splendid Mahmud Khilji' whose name is celebrated throughout *Malwa* for the multitude of his palaces. This will not interfere with the date 1499, ascribed to the water-works by Sir W. Malet†, and the last indeed might seem less in the taste of the martial Mahmud than of his pleasure-loving grandson Násir Ud Di'n.

There is a silly tradition regarding the founder.

Badshah Ghori‡ possessed a talisman, the putting which between his teeth rendered him invisible. One hapless day it slipped down his throat. In a moment the wretched monarch felt a consuming flame devouring his entrails and—

> While within the burning anguish flows,
> His outward body glows,
> Like molten ore—

* From this line is derived the date of the first builder, the value of the last word of the line is of course deducted from the sum total of the letters contained within brackets, 1563—701=862 of the Hegira, or A. D. 1457.

† Malet is said to have taken his date from a history of *Malwa*. It was not from Ferishteh's, for I have searched his huge folios in vain for any notice of *Oujein*. The *Mirat Iscanderi* a history of Guzerat informs us that the water-palace was built by Na'sir Ud Dín.

‡ This Ghori would throw the date still further back, but a Hindu legend is but a frail base for a theory.

to quench his torment, he made the tanks of the water-palace, one or other of which he is always occupying, still invisible and ever on fire, and when his burning body has heated one pool, the miserable immortal seeks refuge in another. It would appear from ancient tradition that instead of the river flowing in two channels at *Kuliya-deh*, the bed of the present left stream was formerly occupied by a pool only. The *Bramha kund*, which is mentioned in the *Avanti-khand* and now converted into a square tank, forms in the eyes of the Hindu the principal attraction of the place. This was perhaps the well *Kalba-deh* spoken of by ABUL FAZL, "The water of which flows incessantly into a cistern which is continually running over and yet remains full."

The innovations complained of are of later date.

I have before mentioned that a broad central path bisects the works. Two tall carved purdahs stood originally on this path leaning like buttresses against the front of the outer arcade, one on the left, the other on the right. The water of two artificially supplied reservoirs sunk in the terrace above the arcade fell down these purdahs and fed two fountains in tanks one on each side of the path. The one to the left is the *Bramha kund**.

When the emperor AKBER was on his way to the *Deccan* in 1599, he substituted for the right purdah a new open archway, which stands out at right angles to the old arcade†. This (if it may be so called) portico is handsome, for the arches are well proportioned, and the whole is built of the red-stone, Spec. 4. Sed non erat hic locus—the new projection having nothing to balance it on the left looks unfinished and awkward. While the one purdah on the opposite side wears a similarly deserted appearance, and seems to complain of the absence of its fellow. The "wonderful buildings" two circular-domed *gumbaz* (domes) with arches opening outside, are agreeable summer-houses, but detract I suspect, from the simplicity of the original design of the works. They stand on the central path, and were the gift of JEHÁNGÍR in 1620 as recorded in the subjoined inscription.

* There is no trace of the fountain of the right kund, but that there were originally two fountains the plan of the building and the two reservoirs above plainly indicate.

† It is on this portico that AKBER's two inscriptions are found. The second seems to have been written after the successes in the *Deccan*, but it is much defaced and the letters do not appear to contain a date.

Inscription in the building (No. 2 of the sketch), of the water-palace.

بحکم شاه جهان ساخت این دو عبرتگاه [1] حسن بعهد جهانگیر شاه
اکبر شاه [2] (بهشت روي زمین) یافت عقد تاریخش که سروران
جهانراست منزل دلخواه *

Another building of probably the same kind, and of which only the foundation remains, occupied a singularly awkward situation as the sketch will shew; and a more glaring fault, the left outer line of the central path is not parallel to the right one but slanting inwards, adds much to the already too distorted appearance of the square. It is difficult to account for the last deformity unless we suppose it the clumsy repairing of some modern bungler.

Notwithstanding these minor imperfections the water-palace is a delightful spot. The chief defect, absence of trees, could be easily remedied; for we have reason to believe, that formerly the neighbourhood was adorned with pleasure-houses, green fields, groves, and the wall enclosure doubtless marked the boundary of a garden*, but of the trees hardly a stump, of the buildings not a trace, remains, and ***Kaliya-deh***, surrounded by barren ravines and uncultivated plains looks strangely bleak and deserted. Still few who have escaped from the heat of the day to the inner arcade, "so protected from the sun that it scarce ever sees it," while the running rivulets cool the air and the murmur of the water falling over the cascades lulls to sleep, will ungratefully call to mind the deficiencies of the place, or feel tempted to re-echo the sentiments of the surly poet, quanto præstantius esset

> ..... viridi si margine clauderet undas
> Herba, nec ingenium violarant marmora tophum.

[1] This word was written on the stone حس.

[2] The space between the brackets contains the date 1030, H. or A. D. 1620.

* The author of the *Seyr Mutuakhereen* describes *Kaliya-deh*, as consisting of a heart-delighting palace, and a well, ever full, and ever flowing, surrounded by pleasant buildings. He adds, that it was a country distinct from Oujein, and whose woods abounded in elephants; while its crops, fed the *Deccan* and *Guzerat*. This mélange of field and forest proves, that the author wrote currente calamo, without pausing to think. That there was formerly a large forest near *Oujein*, the traditions of *Mahakal ban* (hereafter noticed) seem to indicate but there is not now the remotest trace of it, nor was there probably any such when the country about the water-palace was well peopled and cultivated. I should be almost inclined to suspect that those who formerly described *Kaliya-deh* had never visited it, so unlike are their accounts from what we at present see. The author from whom I have first quoted is evidently a stranger to *Malwa* geography, for he speaks of *Dhar* as a city of the *Deccan*.

That book of lies, the *Jehángír nameh*, notices its author's visit to *Oujein*, but does not seem to allude to the water-palace.

The fresh-water lake is probably the *Sola Ságar* (presently mentioned) where many ruined Musalmán buildings, ídgáhs, masjids, &c. still abound, and where the natives of the place believe JEHÁNGI'R to have encamped—of the pavilion I could find no trace. When Sir T. ROE, accompanied the emperor to *Oujein*; they pitched at "*Calleada.*" "This place was formerly a seat of the heathen kings of *Mandoa* one of whom was there drowned in his drink, who being once before fallen into the river and taken up by the hair of the head by a slave that dived, and come to himself, it was told him to procure a reward. He called for his deliverer and asking how he durst put his hands on his sovereign's head, he caused them to be cut off. Not long after sitting alone with his wife and drunk he had the same fortune to slip into the water, but so that she might easily have saved him which she did not, and being asked why, replied that she knew not whether he might not cut off her hands for a reward."

I do not find the name of KALIYA-DEH in the *Avanti-khand* of the *Skanda Purána.*

A short kos south of the water-palace, the fort of *Bhairo*, a high wall with gates and towers encloses the left bank of the *Sipra* in the shape of a horse-shoe. The arch of the wall may be about a mile in circumference; a ditch formed by a mound of earth as an embankment, and like most native ditches without artificial scarping surrounds the fort, and a similar mound, higher then the wall, lines the interior of it for some distance. As you enter *Bhairo-garh* by the west gate, you find on the right a temple to the deity of the place. There is no end to *Bhairos* at *Oujein*, but eight only boast of superior antiquity. This is the principal, and bears the same name, (*Kala Bhairo*) as the well known form of the deity at *Benares*. As the *Kasi Bhairo* is lord of the rest, and has dominion over the jins and ghosts of *Benares*, so this image rules over his fellows at *Oujein*, and holds in subjection all the evil spirits of the neighbourhood. Different names distinguish the other seven *Bhairos** but all are imaged by a rude stone, with large mouth and eyes of red paint. The temple of the three-eyed god now before us, which was built by MAHUDAJI', or as he is familiarly called MOHDOO SEINDIA, is a mere bungala roof supported on a rude wall or by wooden pillars.

Leaving this the road cuts across a neat stone fort about 250 yards square which was left unfinished by its founder MAHUDAJI',

* *Vikrant*, the terrible. *Bálak*, the child. *Báluk*, the baby, &c.

and has never been completed. Passing on you reach the principal attraction of the place, the ghat of *Sidhnath*. The fish here seemed to me larger, more numerous, and more tame, than even at *Bindraban* or *Mandatta*. Many of the inhabitants of the city sending them a daily dinner, two or three of the larger fish may be always seen swimming slowly backwards and forwards before the steps, and when the servant arrives with his handkerchief full of flour and begins calling out áo, áo, stirring the stream with his hand, in a moment the place is in an uproar, and the water becomes so white with the fish that you cannot distinguish them as they jump and splash about in ecstacy. Heads of turtles too, peep out in every direction hastening to the banquet; these last are of enormous size, and so bold, that they drag their unwieldy shells up the slippery step snapping at every thing their small eyes can detect. I witnessed an amusing struggle between one monster, and a boy whose dhot he was tugging at, and with difficulty extracted my own walking stick from the jaws of another. On first reaching the ghát we were expressing our admiration of the size of the fish. Wait, said a bystander, till you have seen *Raghu*; the brahman called out his name in a peculiar tone of voice, but he would not hear. I threw in handful after handful of ottah with as little success, and was just leaving the ghát despairing, and doubting, when a loud plunge startled me. I thought somebody had jumped off the bastion of the ghat into the river, but was soon undeceived by the general shout of *Raghu*, *Raghu*, and by the fish large and small, darting away in every direction. *Raghu* made two or three more plunges, but was so quick in his motions that I was unable to seize his outline or to guess at his species. The natives bathe fearlessly here though they declare that alligators are often seen basking in numbers on the opposite bank. Mahadeo they believe, has drawn a line in the water, giving a command to the alligator, thus far "shalt thou come and no farther." I am sceptical as to the numbers not having seen *one*, though of course a stray brute may now and then appear, but the river confined between high banks runs before the ghát in a full deep stream, and alligators do not prefer deep, and shun troubled waters. Mermaids also frequent this favored spot*, and tales are told of them which would form an excellent supplement to Pliny's marvellous chapter on the subject. But I have really so many wonders to intrude upon you that I must husband your patience.

* Abul Fazl seems not to have doubted that mermaids flourished in *Malwa*, but he confines them to the romantic "stream of willows," the *Betma* (*Betwa*) river.

Siddh Náth presents a pleasant contrast to *Kaliya-deh* by the luxuriance of its surrounding groves: though itself unshaded it seems to have derived its name, for it was originally called *Siddh Náth*, from some sacred tree, "olim venerabile lignum," that once hung over it. The Jains claim a portion of the sanctity of the spot. One of their *Jattis* was sitting under an old leafless stump of a bur, when a gosaín ridiculed him for choosing such a shady situation: judge for yourself, said the jain. The other was no sooner seated, than he felt an agreeable coolness; he looked up, the withered tree was groaning with foliage. This ghat is reputed a place of much antiquity, but of the old buildings nothing now remains, save a circular-domed open *mandir* whose ling has long ceased to be oiled. On the ancient ruins a temple and ghát of the modern white-washy fashion were erected about 13 years ago by some *Indore* merchant.

I was spelling through a staring, fresh-blackened, elaborate inscription cut in modern Hindí on the wall, when a facetious religieux saved me the trouble by informing me that it but recorded the vanity of some *Indore Baniáh* who built the place some 13 years ago, and stuck on it the year, month, day, hour, of its erection, with the names of his grandfathers, uncles, cousins, &c. The information was accompanied with a whine, a "da obolum," and "you have fed Mahádeo's fish, we are also his servants." A trifle rewarded his wit—in a moment the whole ghát was in an uproar, scrambling for a share of the mite.

The brahmans of large towns are proverbially avaricious and quarrelsome. Those of *Oujein* being perhaps worse than elsewhere are consequently held in little esteem. I gave a rupee to one of the attendants at *Bhairo's* temple; hardly had we crossed the threshold before the usual wrangling commenced. Am not I so and so? Am not I a brahman? shouted one voice. You may be a brahman or any thing else was the retort, but we'll share the money for all that. Lamenting to a *Canouje* pandit at my side the degradation of his sect, he explained that nearly all the brahmans of *Malwa* are of the *Guzeráti* classes, which are looked down upon by those of *Hindústán*, and are notorious for their rapacity and avarice: he assured me, that in the larger temples, not one even of his own class could escape their extortions, for that they would not let a visitor quit the shrine, without his leaving what they chose to consider a donation proportioned to his means: but perhaps, added he, they are not so much in fault as the people amongst whom they dwell—*Jaisa dés taisa bés*. Pilgrims on arriving at *Oujein* hire guides to go with them the

rounds of the holy places. These cicerones (*Oudij brahmans**) sit at the ghâts expecting their prey. They require from any brahman or respectable person whom they have escorted, a certificate to that effect in which they are very particular in inserting the name, family, habitation, &c. of the visitor. He who can shew the greatest and most respectable budget of these documents takes a sort of lead amongst his fellows;—hæc dignitas, hæ vires. When a well dressed Hindu stranger approaches the ghâts the guides press round him, "take me I have read" cries one, "I have been here for 30 years and know every corner" pleads another, while a third holds aloft a dirty piece of paper, and shouts in his ear, I escorted Shâstri so and so, here's his certificate. These pious men then push†, bawl and abuse, while the puzzled visitor alarmed at the hubbub, with difficulty extricates himself from their clutches, and must wonder in silence at this first specimen of the holiness of *Oujein*. A little to the south of *Siddh Nâth*, the river as will be seen in the sketch, takes a turn to the right: in the bend and on the right bank is the ghât of *Mangaleswar*, a place of olden fame.

The present buildings, at which on every Tuesday there may be witnessed a crowded mela, a handsome solid ghât, a temple, and *Dharmsâla*, are due to the piety of the excellent Ahalya Bai', to record whose liberality no pompous inscription will be found, though gratitude cherishes, with affection, the memory of her benefits.

Keeping to the right bank of the *Sipra*, and following a path which leads towards the city, you pass a rudely fashioned image of *Dharma Râja*, all besmeared with black paint, a call and ling at his side. Connected with and close to it, stands a small white-washed European-looking room, (unworthily dignified with the name of *Dharmsâla*,) the walls and ceiling of which are polluted with the most indecent pictures that can be conceived. The indelicate figures that so often defile the tem-

* These are the more numerous, but poor brahmans of other *Guzerâti* classes are found, as the Nagar, Audeembir, &c. Maharashtra brahmans also may be met with: my guide was of this jât, a very ignorant old man (I chose him for his wrinkles) who could do nothing but mutter mantras, and when asked a question kept his teeth closed and shook his head.

† As long as there is no gold or silver before them (says Lucian in the *Vusher-non*, of some similar hypocrites) they are very good friends; but shew them a single farthing and the peace is broken immediately; there is no longer any order or agreement amongst them: they are just like the dogs; throw but a bone, they all sally out, bite one another, and bark at him that carries it off—Franklin's Translation.

ples of *Siva* are sometimes concealed in elegant sculpture or shrouded by the veil of time, and we are tempted in our love for the arts or the antique to be indulgent to the errors of an interesting superstition. But the daubs now before us can only have originated in the wantonness of a diseased imagination, and the disgust with which we view them is increased by their freshness, for the place which ought to be thrown down, was built only a short time ago by some miserable bábú. It is pleasing to turn from such a scene to a beautiful ghát a few paces further on, which together with a small but elegant temple of *Gungá* does credit to the taste of RUKMA BAI' the widow of MALCOLM's friend TANTIA JOGH. In the back ground groves and gardens enrich the scene: under the tall trees of the first, numerous tombs and *satti chabutras* add a pleasing solemnity to the scene. The produce of the latter feeds the goddess or her priest.

The ghát has been sacred for time untold. Its ancient name, *Das aswamedh*, might seem to imply that the ceremony of supremacy had been ten times performed here. Perhaps the *Das aswamedhas* were nothing more than the sacrifice of a horse at the termination or opening of some campaign; or we may suppose, and with greater probability, that the title was borrowed from some other quarter as ghâts of this name are not unfrequent, as at *Allahabad*, *Bittour*, and if I mistake not *Gayá*. A little further on but away from the river *Ank-pát* appears, a place dear to the lovers of KRISHNA; for here the Indian Apollo and his brother BALDEO were taught their letters by SANDI'PAN, and exhausted in the short space of 64 days, the whole learning of the *Vedas*. The *kund* in which they washed their taktas*, derives its name of *Dámodara* from a story told in the *Bhágawat*. KRISHNA thirsty one day from rambling about in that hottest of places, *Vrij*, requested a draught of milk from a *Gopi* who was churning. The good-natured girl left her work, and ran to fetch some, which she had placed to smoke on a fire hard by, but unhappily, it had all boiled over. The impatient and disappointed god overturned the curds. Enraged at such return for her civility, the *Gopi* seized hold of her rude guest, but in vain she tried to bind him; no string, however long, would encircle the mocking god, and when at length she thought him secured, KRISHNA ran away with his arms fast to his sides, and was thence called *Dámodara* or the waist-tied. Two temples† built on the brink of the *kund*, deserve notice for the excellence of their sculpturing. Figures of

* *Ank-pát*, ciphering—as taught to a child.

† HUNTER describes them, he saw their interior but during my visit the doors were locked and the brahman had gone to a fair.

various kinds, project in bold relief from the *sikras*, such as tigers which face the cardinal points, and *vairagís*, as large as life, which sit performing *tapasya*, on the top of the body of the *mandirs*, one at each corner of the front (or east) face. The temple to the right is to RÁMA CHANDRA, under whose porch reposes a marble *Seshsaí*, his couch, as the name indicates, the circling wreaths of a snake. The left temple is a *Janárddan*, the reliever of distress.

Janánán dukḳam arddate-iti janárddana.

A black *Garuda*, squatted on the *Nág*, occupies the porch. In front two small *katris* like sentry boxes shelter the one, a *Goverdhana*, in white, the other, a *Keshoraí*, in black, marble: "the beautiful-haired," is surrounded by dancing figure. Two other forms of VISHNU sanctify *Ank-pát* a *Viswarupa*, and a *Sankudhara* whose silly story may be read in the *Bhagawatat*. These seven images* are all carved with much skill, and boast of great antiquity, though the temples which cover them are modern.

These modern temples seem not to have been erected by one person only, for though HUNTER ascribes them to RUNG RAO APPAH† the people of the place named the first MULHAR RAO as the founder. Perhaps MULHAR RAO made the smaller *mandirs*, and has got credit for the whole, by the judicious appropriation of a small fund, to the support of poor brahmans, ten of whom are daily fed at *Ank-pát* in his name. Some told me that AHALYA BAI' founded the charity, but this belief may have obtained from her name being more generally known.

A mound of earth separates *Damodar* from the *Vishnu Ságar*, a piece of water white with the favorite flower of the gods, the *lotus*. A little beyond is the *Gumti kund*, whose banks are lined with various buildings to MAHÁDEO, *Dharmsálas*, *chabutras*, &c. and whose waters communicate with the river of which it bears the name. SANDÍPAN, the tutor of KRISHNA, had made a vow to bathe once in 24 hours in the *Gumti*, but as travelling every day to the river and back again would have left him little leisure for the instruction of his pupils, the young god proposed bringing the river to *Oujein*, and he satisfied the pious scepticism of the domine, by desiring him to write on a piece of paper and to throw it into the *Gumti*: in a few hours the

* The *Avanti khand* mentions ten Vishnus. Of the other three, there is a *Parsattam* near the *Sola Sagur*, a brahman, the discomfiter of Bali, whose story is so well told by Southey, and a Baldeo at the *Gumti-kund*

† The Dewan of the Puar,—the compiler of the Modern Traveller seems to mistake him for the rája.

paper was picked up in the crowd. On each side of the road as you now turn towards the town, the eye meets nothing but gardens, *baolis*, and pleasure houses, the property of two or three gosaíns and vairagís whom the liberality of the Sindias has enriched. Rent-free lands and exemption from duties enable them to trade with certainty of profit. They are of course far from being what their profession might imply, devotees ; and though several of the edifices about *Oujein*, are due to their liberality, they were described to me as very Don Juans, the terror of every jealous husband in *Oujein**.

The only place I will stop to notice between these gardens and the city, is the *Sehesra Dhanakeswar*, a temple of MAHADEO. The sons of a rája BIDORUT reposed after the fatigue of the chase, near a deep pool, which a rishi performing *tapasya* informed them was the abode of a daitya, who afflicted the whole earth, adding that their names would be for ever blessed, if they would rid the world of the tyrant. The young men accordingly collected an army and marched against the demon, who in a moment annihilated them all: the rája in despair at the loss of his son, made supplication to MAHADEO, who pleased with his piety lent him the bow (*dhanak*), one arrow sent from which had the efficacy of a thousand. The rája armed with the wonderful weapon destroyed the enemy, and in gratitude to his avenger so redoubled his prayers and penances that MAHÁDEO desired him to ask a favor. The pious king requested the deity to inhabit some *lingam* which might more exclusively be the object of his adoration. MAHÁDEO put his countenance into a stone, which he authorized him to worship as the *Sehesra Dhanakeswar*. The present temple is modern but handsome. Mass upon mass of ornamental carving is heaped upon the sikra, and the dome of the porch has painted in the interior some of the wonderful actions of the deity. Several smaller shrines sanctify the court around it, where is also a fine baolí constructed by CHATUR GIRA GOSAI'N : a high wall encloses the whole. The building is ascribed to SEDASHEO NAIK, but who this was no one seemed to know. SEDASHEO is a common name in Mahratta history, but the person here spoken of was probably the benevolent banker of whom such an interesting anecdote is related by HUNTER†.

Passing over the ancient city without remark for the present, we reach *Rana khan*‡ garden which looks on the river where it flows past the

* As TOD has remarked, some of the richest inhabitants of *Malwa* and Central India are the mercantile gosaíns.

† The unfortunate leader at *Paniput* is never that I remember called Naik.

‡ I write the name after MALCOLM though it is pronounced as GRANT DUFF spells the word, RANNAY KHAN—I have never seen it written.

town ; the shade and the view of the ever busy ghâts makes this a pleasant encamping place, and here I pitched my tents. A wall whose gates and bastions give it the appearance of a fort encloses a square of 150 yards. The interior is adorned with summer-houses, terraced walks, fountains and a pucka drain to circulate the water. At the south-east corner a domed *maqbarch* covers the remains of Shamsher Khan the son of Rana Khan. It is a handsome but not a costly building, the black stone is relieved by a red porphyry, (Spec. 5,) the same as that of which the *Joura* bridge is built, and which is quarried at *Rutlam ;* the tomb itself is of common brick without inscription or ornament. The garden of the lucky bhesti* boasts itself the most favorite spot for pic nics in all *Oujein.* This year (I write in March) being the predecessor of the *Singasta,* all the Hindu world was marrying, and there was no end of feasting and tom-toming. As my visit was also partly during the Huli† not a day passed in which the garden was not filled with groups of men and women enjoying themselves under the shade of the trees ; the women walked in procession, some old lady, a curious pyramid of flowers on her head, in the van leading a shrill chorus, in which all the rest joined, from the ancient grandame with her trembling treble to the little child trotting up in the rear. When they reached some suitable spot they squatted down in a circle and eat, chattered and sang till the day waned, when they marched back to their homes in like solemn procession. The gentlemen sat apart and like European gentlemen longer at table than the ladies. Instead of wine after dinner they indulged in the similar luxury of opium, either chewing it, or drinking it out of the palms of their hands. All the walks were strewed with the plates and dishes of these parties,—leaves of the bur neatly joined together. I asked the havildar of the garden whether his fruit trees and vegetables did not sometimes suffer from this crowd of visitors of whom a large proportion are mischievously aged boys ; he seemed indignant at the very supposition, and indeed he evidently enjoyed the fun of the feasting more than any one else, was the constant guest (perhaps 'tis the perquisite of his place) of one or other of the parties, and strutted about the walks with a rubicund visage and clothes all reeking with huli water.

* See his story in Malcolm's Cent. India 1, 119, Grant Duff, 3, 27 ; seems to doubt the romantic tale, but it is generally believed in *Malwa.*

† It is but fair to observe that though my visit was during the *Saturnalia,* the natives, with hardly an exception, behaved to me with civility and politeness, and this though I passed two or three times every day, a *νευροστασια* which lay stretched across the principal street and is always the rendezvous of all the wits and blackguards of a town.

Oujein is surrounded on every side, but the south with an almost uninterrupted belt of groves and gardens. Their names, had I room for them, would be a history of the place and of its manners,—on one side lies the garden of DOWLET RAO, on the other that of his carpenter: here is the garden of a rája MALL, whose name is his history*, while near and in contrast to it is another which outlived a few days ago, gloried in the name of the BAIZI' BAÍ, but lished by a change of title the fickleness of fortune. The *Mahurájlished* by a change of title the fickleness of fortune. The *Mahurája-Bágh*, (DOWLET RAO's) was formerly the pride of five proprietors, but the modern AHAB, coveted his neighbour's vineyard, out of five small gardens made a large one, and deprived the owners of the inheritance of their fathers. The best of the gardens seem to have been planted by Musalmans, who, we learn from BABER, introduced the fashion into India: few of them have walls or indeed any apparent boundary.

The ghâts before the town are neither numerous† nor handsome. The largest has the name of *Pisách-mochan* from a *lingam* near it, by pujá to which a demon *(Pisách)* had the term of his punishment abridged and became mukht or beatified. At the back of *Pisách-mochan*, a walled and shady enclosure contains the *chattrís* of some of the Sindia family. The most remarkable is that of RANAJI', the founder of their greatness‡.

Opposite this ghât on the left bank of the river, and half concealed in a grove, stands the *Akhara* or hospitium of DATTA TRE, an extensive building containing temples, *baolís*, and *dharmsálas* for the accommodation of holy pilgrims, who have also food served out to them from a fund supplied by the liberality of the sirkar or of the founder of the place, GOPAL GIR§ a gosaín; DATTA TRE is the 12th incarnation of VISHNU. A rishi by his penances so pleased the holy trinity that they promised to grant him any favor he should ask of them: he requested a son like unto themselves. And they each put a portion of

* There are two princes in the *Malwa* History whose names terminate in Mall: all the natives could tell me of the founder of the garden was that he was a *Qadím ká Rája*. They scouted the idea of his being a modern.

† The ghâts at *Oujein* are 28 in number. But many of them are at a distance from the city.

‡ As RANAJI' was buried at *Shujahalpore*, the chattrí here is merely honorary.

§ I much fear I have been misinformed here. The place is doubtless a Vaishnava math, and unless the word be taken cum brintiâ, would hardly have been built by a gosaín. I was unable to have an interview with the mahant by name PURAN GIR who could have satisfied my doubts. Several Saiva mendicants were about the place, but in this *Sivapuri* they are everywhere.

their divinity into the rishi's child, who was thence called the Datta tre or the three-gifted.

Between Rana Kha[illegible] garden and the river, a small plain but much esteemed t[illegible]le of Kedáreswar attracts the eye: little worship is however paid there except in *Aghan*, during the whole of which there is a continual melá around it, and the rest of Mahá-[illegible]o's temples are deserted to do it honor. The story of the mountain god, one of the twelve chief lings is found in the puráns, but the brahmans of *Oujein* have embellished the tale à leur façon. The deotas who dwelt in the snowy range complained to Mahádeo that they were tortured with never ceasing frost. Mahádeo sent for Himálaya and took him to task for being so cold. Let your abode be with us said the mountain and not only will we constantly adore you, but we'll abate our rigour for eight months of the year. The god consented and settling in the hill near a warm *kund*, a crowd of devotees came to worship him under his new name of Kedáreswar, lord of the mountain stream. In process of time the world became so wicked that Kedáreswar withdrew himself from the sight of man. One day some holy men, who still lingered about the spot their lord had consecrated, were lamenting his loss in most piteous strains, When shall we find such a god? Who is equal to him? &c. &c. suddenly a voice issued from the earth, "go to *Mahákál ban*, there I will appear in the river *Sipra*." With joyful hearts they hastened to *Oujein* and prayed by the banks of the holy river, when just as the sun shewed his first rays, a stone rose out of the water, and was immediately hailed as Kedáreswar. Crime however has deprived *Oujein* of a part of the god,—shocked at the desolating wars of the Pándus, Kedáreswar again fled the pollution of man, and concealed his countenance in the shape of a buffalo.

Bhi'm Singh in despair at the retreat of the god consulted a *rishi*, who explained the metamorphosis, and advised him to bestride the world like a colossus, while all the buffaloes in the earth should be made to pass between his legs. All passed but that which concealed the divinity, who could not submit to such degradation. Bhi'm thinking, (to use the expression of the celebrated Bishop Fox,) that he had now "got god by the toe" ran to catch the beast, but it sank into the earth: subsequently Kedáreswar's head rose up in the *Himálaya*, while the trunk alone reappeared at *Oujein*. It would be an endless task to recount even the names of the innumerable shrines which form the boast of *Oujein*. It is related that Indra and his court, went to pay devotions at *Mahákál ban*, a forest 16 kos in

extent, which occupied the site of the city subsequently built. Learning however that there were seven crores of thousands, and seven crores of hundreds, of *lingas*, promiscuously scattered about the holy spot, they returned, unshrived, to *Amarawatipuri*, and lest while they were worshipping one *lingam*, their feet should unavoidably tread on some other. Even in this age of sin and unbelief besides the countless ruined *mandirs*, and small enclosures and *chabutras* to *Nandi* and the ling, there are to MAHÁDEO alone 84 temples supported by the sirkár. The smallest has two rupees a month for the maintenance of a priest, and a trifling allowance for the expences of pujá. I will not trespass upon your patience further than to describe the three principal temples, the *Mahákál*, the *Nágchand* and the *Agasteswar*, which are distinguished from the rabble, the "*fouj*," by the names of *Rája*, *Kutwál*, and *Dewán*.

Mahákál is the handsomest, the most holy, the largest, and the richest, temple at *Oujein*. SCINDIA allows it 11, the PUARS of *Dewas* two, the GUICKWAR four, and HOLKAR two rupees a day*.

The greater part of the funds derived from these and many other sources, is, my pandit assured me, devoted to feeding poor brahmans, but the thinness of attendance at the *sadábirt*, tempted me to answer him in the words of EUCLIO in the play.

Ego novi istas polypas qui sibi quicquid tetigerint, tenent.

Not to mention however the salaries of the servants, and the cost of keeping the buildings in repair, the expences of the worship alone must be very considerable; besides the ghee for the lamps, which burn night and day, the various kinds of food, the precious oils, and the ever renewed flowers, rich clothes and handsome ornaments must be provided to honor the god. Every Monday afternoon his servants bring out the five-faced *mukhat* and carry it in solemn procession to a sacred *kund*; attendants walk by the side of the light *vahana*, fanning it with peacock's feathers and brahmans call aloud the various names of their lord: "the unborn," "the never dying," "the universal soul," while the wild yell of the conch rends the air, and the incessant *naqárás*, and the shouts of the multitude make hideous music. Having reverentially washed, and presented food to this brazen mask† they convey it to the temple and place it over the *lingam*, a stone

* The family of the latter formerly gave five rupees a day, the present representative, like his ancestor JESWANT, has no partiality for the sacred class.

† It has I am told, a washing of gold over it, but it is with that exception entirely of brass.

about a yard high*, which it fits like a cap, and entirely conceals. They now clothe the idol in [illegible] robes, and throw wreathes of flowers and rich necklaces [illegible] it, while layers of costly carpets are now spread one [illegible] the other on the floor before the shrine. Again they [illegible] pious mockery of offering food in silver vessels, the usual [illegible] is performed, and a shástri chaunts aloud during the greater part of the night, selected portions of the holy writings. On the other days of the week the *mushut* is locked up. No other temples, but the three lords, can boast of this head-piece to their lings. The Máliks of *Mahákál*, those who have the management of the funds, are Telinga brahmans. Bahorees, a Mewarri class, receive a monthly stipend to perform the *pujá*, and menial offices. The name of the divinity of the temple, that by which he is more correctly styled is ANANTA KALPESWAR, lord of ages, without beginning or end. The origin of this name and of the temple may be told in verse.

For proud pre-eminence of power,
Brahma and Vishnu wild with rage contended;
And Siva in his might
Their dread contention ended:
Before their sight,
In form a fiery column did he tower,
Whose height above the highest height extended,
Whose depth below the deepest depth descended:
Downwards its depth to sound.
Vishnu a thousand years explored,
The fathomless profound;
And yet no base he found:
Upwards to reach its head,
Ten myriads of years the aspiring Brahma soared;
Above him still the immeasurable spread.
The rivals owned their lord,
And trembled and adored.

The temple which formerly covered this self-same, so marvellously-extended, stone, (now shrunk into more convenient proportions) was enclosed by a wall a hundred cubits high; 300 years had been expended in its erection, and if as FERISTEH writes, it was the counterpart of *Somnáth*, the wonderful fabric was supported by numerous pillars overlaid with plates of gold, and encrusted with rubies and emeralds. Instead of the greasy chirághs, which now diffuse more smoke than light through the sanctum, one resplendent lamp alone illumined the glorious face, whose light, reflected back from innumerable

* I did not see the covering of the ling but verified my pandit's description by that of another brahman: the size of the stone is by no means remarkable. The phallus of the brother temple at *Hierapolis* was 180 feet high.

precious stones spread a refulgent lustre throughout the temple*. The building of which this exaggerated description is given, was destroyed by ALTAMSH, who thought to carry off in triumph the stone which even gods had respected. But the brahmans pretend that they took away a mere stone, for that the ling inhabited by divinity eluded their invisibility the polluting touch of the infidel. The present temple is said to have been built, (it was probably repaired only,) about a hundred years ago, by RAMCHANDRA BAPPU, dewan of RAM RAO†. It stands in the midst of the city, in the centre of an extensive court, enclosed by walls‡. Steps lead down from the western face to a small square tank, the *Kote Tirhut*, the bathing in which has the efficacy of a million pilgrimages, for *Garuda* filled it, by a drop of water from every sacred *kund* in the universe, and it thus partakes of the virtues of every one of them.

The court which surrounds the *kund*, is filled up with verandahs, partitioned into small cells and *séwalas*, each occupied by an emblem of divinity. Above the verandahs are wooden *dharmsálas*, where brahmans are daily fed, and lie sheltered from the heat of the sun. I have before alluded to the difficulty, which deterred the court of *Indra*, from worshipping at *Mahakál*. NÁGCHAND, having told them of a ling, which absolved from the unintentional offence of treading on any other, they built a temple to distinguish it, which they called from the name of their informant, *Nágchandreswar*. The brahmans have a tradition, that NO RANG PADSHAH, (so they call AURUNGZEBE,) sent an army to destroy this, and all the other sacred images of *Oujein*, but no sooner had the infidels once struck the stone than a stream of blood issued from it, which becoming immediately converted into bees, stung the greater part of the intruders to death. Terrified by the prodigy, the emperor desisted from his impious design. This story is an amplification of the miracle related by TOD of the shrine of *Onkar*, though perhaps the fable may seem more applicable to *Oujein*, for here all the ancient images (if indeed as believed they

* PRICE, FERISHTEH, MAURICE.

† Every one we asked gave the same names, but I can find none such in Mahratta history. It may be a corruption of RAMCHANDRA BABA (Shenwee), the protege of BALLAJI' BAJI' RAO, who was dewan of both KANAGEE SCINDIA and of SADASHEO RAO.

‡ There is a description of it in a late number of the E. I. U. S. J. The author of the paper rather strangely mistakes this monarch of lings for a temple of VISHNU. The same writer miscalls a statue of Reessil Muni near Bhirtery's cave a *Parisnáth*. The image which the brahmans pretended to conceal, was either the *mukhat*, or more probably, a device to extort money.

are the original images), standing mutilated, while at *Mandatta*, nearly every figure has lost a limb, and in one place, where a very beautiful temple approached by avenues of large elephants, not only has the temple been violently thrown down, but the trunk of every elephant has been barbarously cut off and thrown into the river*. The history of AGASTESWAR, one of the twelve lings, (at *Dwárika*,) contains a pleasing moral. The dewtás defeated by *daityas* applied for assistance to AGASTA. They found the saint performing *tapasya*, his thoughts abstracted from worldly concerns, and his eyes closed in deep devotion. At the tale of their wrongs, however, his eyes opened and such angry fire flashed from them that in an instant the *daityas* were annihilated. But when the holy man reflected that the province of saints is not to destroy but to save, साधुको चाही शीघ्र स्वभावसे रहै, sorrow seized his soul. Vain had been his prayers and fasts, his dreadful penances and long probation, one moment of anger had cancelled them all, and with an exhausted body and broken spirit, he prepared to seek absolution for his sin in a tedious course of unrelenting severities. But the god he had worshipped took compassion upon him. Desired to make what request he pleased, the sage only begged remission from his crime, and that the deity would inhabit some ling to which he might for ever express his gratitude. Ευχης δικαιας ουκ ανηκοθος θεος; MAHÁDEO pardoned the supplicant; oblivion restored serenity to his mind, and the ling of AGASTESWAR still relieves the repentant sinner from the gnawings of an evil conscience. Besides these 84 lings there are 11 ancient Rudras, each of which has a distinguishing appellative. The skull-adorned, the three-eyed, the air-clothed (*i. e.* naked), he who wears a turban of matted hair, whose ornaments are snakes, who wanders where he lists, the lord of light, &c.† All these forms are represented by the ling, and the temples which cover them are for the most part small and plain. The Ganeshas can hardly be numbered, but six are distinguished by superior antiquity and by sesquipedilian names: there is also a Chintámani of much repute, a few miles from *Oujein*. The *chaturthi* (4th) of every month‡, is devoted to its worship and in the month of *Chaitra*, there is a melah on the four Wednesdays. We find twenty four *matas* and three *devís* mentioned in the *Avanti khand*; the *devís* being a *Lakshmí*, a *Saraswatí* and an *Annapurná*, they are all

* See TOD's Rajas than, 2: 395, note.

† *Kapálí, Triloch'an, Digambar, Jatadhari, Surup surbang mukhar, Vámachari, Kulanáth*, &c.

‡ The 4th day of the month is always kept as a fast by pious Hindus.

still worshipped, but I learnt nothing regarding them worthy of remembrance.

The temple of *Harsuddi* (included in the Mu—) deserves more than a passing notice. It is celebrated for its antiqu— its holiness, and for containing the identical idol, so devoutly worshipp— the VIKRAMAS. On a shelf behind the image, is a head carved in sto— regarding which a singular tradition obtains.

VIKRAMAJI'T was in the habit of every day cutting off his head, and of presenting it to the blood-thirsty *Devi*, the goddess generously restored the offering and replaced it uninjured on its shoulders. The king at length in an excess of devotion vowed that on no day should food or drink pass his lips, till the extraordinary sacrifice had been performed. One luckless morning however, he lost his way out hunting, and feeling so overpowered with fatigue and thirst, that he could proceed no further, he cut off his head and desired his attendants to take and present it to the accustomed shrine. As they were carrying the head along, some flies feasted on it, and the goddess disgusted with the half-eaten offering, in her indignation converted it into stone; the expecting corpse shared the same fate; the head has ever since occupied a place in the temple, and the petrified trunk is still, it is believed, to be seen in the neighbourhood, though in so secluded a spot that the seeker must lose his way to find it. A different version of the tale relates, that the king was fighting with SALIVAHAN on the banks of the *Nerbudda*, and that unable to leave the field he sent his head in a golden charger and wrapped in rich clothes to HARSUDDI. A kite attracted by the smell of blood carried off the head, but soon dropping so tough a morsel, it was taken thus mangled and dirty to the shrine of the goddess, who spurning with her foot the unwashed* banquet it became stone. We read in WILFORD'S puzzling essay on the Vikramas, that one of the peculiarities of these princes, was the being always ready to offer up their heads to Devi: none however are supposed to have performed the sacrifice more than ten times, for so many times only had their attendant demon the power of restoring them to life. VIKRAMAJI'T indeed at last lost his head for aye, but it was not on this occasion cut off by himself, but by his enemy and conqueror SALIVAHAN. The story here told is evidently made up from some of the numerous fables which are extant on the subject.

The temple, a huge pile without sikra, contains besides the principal

* "When a sacrifice is made to Chandika the victim's head having been cut off must be *sprinkled with water*."—As. Res. 5 · 390.

idol, a Ganesha, several lings, &c. [illegible] has an allowance of five rupees a day from the sirkár.

The Máliks of the *matas* are gosaíns or málís; brahmans of course the pujá. Of the modern temples the principal [illegible]ms of VISHNU. An *Ananta*, distinguished only by its [illegible]e sikra from the surrounding buildings, stands immediately opposite to RANA KHAN's garden. It is only opened in the evening. I was not permitted to approach nearer the idol, than the edge of a low room, supported upon numerous wooden pillars, and about thirty feet square. This room was dark, which gave a theatrical effect to the lighted recess in the back ground, where the god and LAKSHMI' sit dressed in rich clothes: GARUDA waits in front, while two or three brahmans reading the scriptures in a low tone before them, increase the picturesque of the scene. Nearly touching this, is a temple to *Bhagawán*, which differs in no respect from the last, but in the absence of a Sikra. The fortunate god supported by LAKSHMI', and SI'TA, all gaily dressed adorns the recess, GARUDA occupies his usual place, and at the feet of the deities are ranged numerous small brass images, of the various forms of the god. This place was built and is supported by the rája of *Baglí*. Here also as at the last temple, and for the same purpose, that of heightening the effect, the spectator admires in darkness and at a distance.

The *Sedasheo Naik*, who has been before alluded to, has left another monument of his munificence, in a splendid temple to *Janarddana* in the very heart of the city which from its convenient situation, and from the scriptures being daily read aloud there, has numerous votaries. Four handsome sewalas occupy the corners of the enclosing quadrangle, and ten brahmans (the number was formerly 50) daily receive food in the *dharmsálas*. I was told also of a *Jaggannáth* and a *Badrináth* worth visiting, but want of leisure prevented my seeing them. The latter was built by the subscription of the baniahs, and is said to be large and handsome. I must not omit among the modern temples that of which the *Jains* were so unceremoniously deprived*. This fine building bears the expressive names of *Jubareswar*, the *Zaberdast*, and *Jain Banjaníswar*, the *Jain*-expelling lord. The ling, from the circumstances attending its consecration, has numerous votaries, though considered far inferior in sanctity to the more ancient shrines. The exiled *Párisnáth*, stands in a humble *kotrí*, quite close to the splendid mansion which was built for him, but I could not obtain a sight of his image. Indeed my information regarding the

* See the story in MALCOLM's Central India.

Jains is very unsatisfactory. They are, and have some cause to be, jealous of strangers, and will not admit them into their sanctuaries. From an *Oujein Jatti* with whom I have lately become acquainted, I learn that they have 16 mandirs in the city; 13 *Sitambarí*, and 3 *Digambarí*. The *Sitambarí* are always the most numerous in Málwa towns; the resident *Juttis* are not more than 12 in number. Of the temples, three or four seem ancient: a subterraneous one to *Párisnáth* more particularly so. It is near or upon the site of the old city, and cannot be visited even during the day without a light. A *Párisnáth* also about ten miles from the town has the reputation of antiquity, and *tirath* (pilgrimage) is performed to it twice a year.

The *Rámsanehi* sect does not appear to have spread much to the south of *Mokandarra*, nor could their pure philosophy be expected to flourish in the superstitious atmosphere of *Oujein*. They have however one plain temple in the city, and about 12 *Sadhús**. I do not particularize any of the other sects as they generally join in worship at their respective *Vishnava* or *Siva* temples. The *Dadus* and *Kabír Panthis* are common amongst the military, while the courts of *Vishnu* are filled with *Ramavuts* and *Ramanujas*, but the varieties of gosaíns are perhaps less than might be expected, and of any local peculiarities no information has reached me. My catalogue of the holy things of *Oujein* is not yet exhausted.

At the foot of nearly every tree, commemorating the courage or weakness of woman, leans a *sati* stone, which some pious hand has removed from its ruined chabutra, and set up to be worshipped in the shade. These tablets have usually sculptured on them a male and one or more female figures, with a symbol to mark the rank of the deceased; as a horse for the cavalier, a cow for the brahman, and for the *Rajput* (I suppose) a sun and moon†. Sometimes the figures are more numerous; horses and attendants crowd the field, and a dome supported on pillars protects the stone from the sun and rain. On a few, apparently the most ancient, the female figure is so gracefully expressed that I more than once felt tempted to commit a sacrilege and to steal one to adorn my study. Near SHAH DAWAL'S *Dargáh* where a battle was fought‡, the groves are studded with such affecting monuments which are supposed to cover the remains of the slain. Pujá is commonly paid to these stones; they are found let into the walls of tem-

* They have also three or four Ramdivaras at *Indore*.

† Some of the stones scattered about have merely warriors on them without any female figure. They may have some connection with the commemorative tablets mentioned by Col. SYKES in his Essay—Journ. Roy. As. Soc. 4.

‡ HUNTER gives a history of the battle.

ples, or resting against the door, or occupying a deserted sewala, and the pious villager as he passes one under a tree mistakes the sculpture for some form of [illegible] and besmears it with ochre. Milk once rained at *Roma*,[illegible] polluted with blood. Lycus tells of a fountain in [illegible] which the natives fed their lamps. But the streams of *Oujein* more rich and curious, produce not a polluted liquid, or mere food for lamps, but milk, fresh, wholesome milk. Abul Fazl who believed that the *Sipra* displayed this phenomenon*, was not aware that other waters of the vicinity have the same property. Of seven sacred tanks at *Oujein* two occasionally manifest the miracle. The *Rudra Ságar*†, or rather the *dádh-talao* which is near it, and the *Khair (Kshira) Ságar*, which derives its name from the mess so called made of rice and milk. A like prodigy is related of a pool near *Chittrakoṭh* in *Bundelkhand*, which may be annually verified on the dark half of the month Kartik during the night only.

The miracle is sometimes reversed; for the *Sola Ságar*, which is now a large piece of water, was originally a small cup of milk. A rishi observing that his cows returned from grazing with undistended udders, concealed himself and detected a *gowala* in the act of milking the cows. The discovered thief ran away, and in his haste dropped the vessel which contained the stolen milk,—the spilt milk was the origin of *Sola Ságar*.

The credulous *Oujeinís* receive, in its literal sense, the name of another of the lakes, the *Ratna Ságar*, and believe that precious stones at times rise out of the water and glitter in the eyes of the fortunate worshipper. It was originally no doubt a mere complimentary epithet, just as the Dee is called the *Ratnákara* or house of gems. But the *Sipra* is, par excellence, the stream of wonders. Its sanctity commences about four miles south of *Oujein* at the *Triveni*, where the three waters the *Riatka*, the *Rutkia*, and the *Chippra*, (*Sipra*) meet. During the drought which desolated this part of India three or four years ago, so little water remained in the river, that the citizens became alarmed. Numerous were the prayers, the homas, the offerings of ghee and milk on its banks. "One morning (I use the words of the chief Mullá of the Bhoras who prefaced his tale with the ominous caution of "you'll not believe me") I went down to the ghâts, what was my astonishment at finding the bed of the river which I had left nearly dry a few

* It is amusing to find Gladwin taxing his ingenuity to explain this—why did he not also explain the Parus-pattal and the mermaids.

† The *Rudra Sagur* is not unfrequently dry; the natives tell you that bones thrown into it in the rains, are decomposed, by the time that the dry weather exposes its bed.

hours before, covered with water a foot deep. No rain had fallen at the city or for 20 miles round, it was a visible interposition of God."—I am not surprised at the credulity of the Bohra, at his telling that he saw what he never could have seen; ignorance is always more ready to wonder than to investigate;—' sanctius et reverentius visum de actis deorum credere quam scire.' The disease of superstition which converts "the freshest sandal-wood into a flame of fire"* has infected every class at *Oujein*, where miracles are daily believed which seem to defy belief. During my visit, a gosaín ran an iron stake through his body;—a brahman passed his hand over the wound and cured it†. The Musalmáns in their turn, boast of a faqir, who has been for years in the habit of standing in the open air when it rains; the water separates in a cone over his head and does not wet his body. ‡The frequent recurrence of and ready faith in these miracles, "seen, heard, attested, every thing but true," teach us, how cautiously we must receive, when superstition is concerned, the testimony of witnesses however numerous, or disinterested; and perhaps in like cases the most rational rule, is almost to adopt the paradox of MACKENZIE, and "to doubt of strong evidence from the very circumstance of its strength."

The Hindus of *Oujein* do not seem to be much troubled with sectarianism; though MAHÁDEO is of course the most popular divinity, the worshippers of other gods are not molested, nor are the objects of their worship neglected.—A brahman whom I questioned on the subject said in answer, "we treat our deities as you English gentlemen do your friends in a cantonment. We call on them all round but are more intimate with some than with others." It would be difficult to form an estimate of the number of places at this city which are devoted to the worship of the brahmanical Pantheon, but ABUL FAZL certainly speaks within bounds when he enumerates them at 360.

Leaving for the present the Hindu and his faith, let us devote a few lines to the followers of the prophet. The orthodox sect of Musalmáns, during the fighting times of the first SINDIA, attained consider-

* Sentiment of an Indian author quoted by Sir W. JONES.

† I was to have witnessed this trick, but was prevented by illness.

‡ JEHANGIR tells us that a shower of gold fell in his presence on the head of a saint. The emperor perhaps never saw it, for he is a most unblushing fabulist: or if he did, even his credulity seems to have suspected a trick, for he speaks doubtfully of it and his courtiers laughed at the saint and his miracle; but in the case of our faqir a trick seems out of the question, and the numbers who tell the tale must believe it, on hearsay.

able consequence in *Málwá*, but they are now few in number, without power and without money. The principal family, at the court of Mahadji' Sindia was that of A'dil Beg*, of which it may be convenient to give a short account, as to its members most of the Musalmán buildings of *Oujein* are due.

	By a wife	By some mistress
A'dil Beg,	1. Abdul Haki'm Beg.	Chamman Beg.
	2. Manowar Beg.	
	3. Anwar Beg.	

Of A'dil Beg's history I know nothing†. To his eldest son a few lines only, in Malcolm's Central India, are devoted. But he is much celebrated in *Malwá*, and was sent on several important embassies. On one occasion, when he was vakeel to the *Oude* court, Asuf ud Doula, pressed him to remain in his service. Abdul Haki'm excused himself in a compliment to both his patrons which raised him in the estimation of the Vizier and much endeared him to Sindia. It is said that whenever he entered the *Durbar*, his *Mahratta* master rose slightly from the cushion, (an honor he paid to no one else) calling to him in a friendly manner as sáhib and seating him by his side. One day being sulky or lazy he neglected the ceremony. The mortified Beg returned home, dismissed his establishment, and retired in the garb of a faqir to a neighbouring mosque. Three or four days afterwards Mahadji' remarking his non-attendance at court inquired the reason. "No one" said his brothers, "knows quelle mouche piquée but he has turned faqir and is telling his beads in his father's masjid." Sindia immediately rose from the durbar, hastened to the mosque and addressing the pretended faqir, said, "what is the meaning of this?" "My lord," replied the nobleman, "I am your slave and live only in your favor; you have always distinguished me above the rest of your court by rising when I entered the durbar. It was a trifle no doubt, but a trifle on which hung my honor and dignity: the last time I approached the presence you received me without the usual compliment, exposing me to the sneers and reflections of my enemies and to the mortification of thinking that I have lost your affection. What business have I at a court where I am no longer regarded." Mahadji' made no answer, but taking him by the arm with a gentle violence brought him back to the palace.

* I do not mention Rana Khan, as his history is comparatively well known.

† I may as well premise that my library is scanty, I have neither Prinsep's *Ameer Khan*, nor Brigg's *Mahomedan History*. The gallant A'dil Beg, in the Rana of *Oudeypoor's* service was a *Sindi*. The father of Abdul Haki'm, I believe, a *Deccan* Musalmán.

He continued in great favor for some time, but seems, at last to have been supplanted by CHAMMAN BEG. The rise of this younger brother is curious. It appears that while all his family were in power, CHAMMAN BEG alone had remained without appointments. He became however intimate with the dewan who introduced him to his master. SINDIA surprised that a son of A'DIL BEG should till then have been unknown to him, asked ABDUL HAKI'M how many sons his father had left, "three" he answered, repeating their names. "And CHAMMAN BEG?" "O he's not my brother, but the son of some slave girl." Boiling with rage the equally low-born Mahratta turned his back on the blundering BEG.—CHAMMAN was immediately taken into favor, was sent to take charge of *Mandeswar*, and subsequently rose to great power and distinction.

MANOWAR BEG had some command near *Bhurtpore*, but being defeated by the Jats he returned in disgrace and was never afterwards employed. The district of *Mandeswar* had been entrusted to A'NWAR BEG but he was removed to make way for his illegitimate brother*.

Of about fifty mosques not more than seven or eight are at present frequented. The principal two very handsome buildings in the midst of the city bear the names of the founders A'DIL and CHAMMAN BEG. One of the deserted mosques is called *Bé-neo*, or without foundation, because the under surface of the lower range of stones of its walls, is on an exact level with the ground about it, and really as the place is small and low, and built on the crest of a hill, it may possibly have no foundation. The *Oujeinís*, however, confirm the propriety of the name by a fable which has certainly no foundation. A Kábul faqir took it into his head to travel, but unwilling to leave a favorite mosque he carried it about with him on his shoulders. Arriving at last at *Oujein*, a brother faqir whom he had formerly known, called out, "Friend, what are you carrying that great thing about for, put it down here." The weary traveller deposited his load, but never took it up again, for charmed with the place, he made it his home, and a small tomb in the court of the mosque is shewn as the spot where rest his remains†.

There is an Arabic inscription over the door, consisting apparently,

* I cannot help, even at the hazard of being tedious, again apologizing for the meagreness of these details, information regarding the personal histories of individuals is easily obtained by men in office, but with great difficulty by a subaltern in a cantonment.

† A Jain assured me that this place was an apasia or reading room of his sect, but it is evidently a Musalmán building.

of extracts from the qurán, but I was too pressed for time to stay and decipher the nearly obliterated letters which were placed too high to be read from the ground. But few of the other Musalmán buildings merit description. In the heart of the city and close together, the tombs of two ladies stand in quadrangles, enclosed by walls. One covers Rekmat Bi'bi', a person more celebrated for liberality than modesty, for she annually expended in a tazeea 700 rupees of the wages of prostitution. The occupier of the next tomb would be shocked at its vicinity to so unchaste a character. She was the beautiful wife of a Nawáb Bakhtár Khán, whose affection for her induced him, in her last illness, to summon a learned Hakím from *Surat*. But in spite of the arguments and prayers of her friends the prudish lady would not consent to her pulse being felt by a stranger. The doctor suggested that she should hold one end of a string, passed through as many doors and walls as she pleased, while he by feeling the other end would judge of the state of her body. The lady seemingly consented, but tied her corner of the string to a cat's neck. Alas! cried the doctor from without, that cat is starving to death, pray give it something to eat. The husband enraged with the fastidiousness of his wife insisted upon her again holding the string, but when he left the room she tied it to a post. The doctor who was not to be deceived instantly in a rage quitted the house, and the lady fell a martyr to her too-scrupulous delicacy. Much treasure is supposed to have been buried with her, but it is now no longer searched for, for it is believed that a party formerly employed in the unholy act of endeavouring to rob the dead, lighted upon the spot where the body was deposited. It was found lying in a sandal wood cradle and the face so piously concealed during life, became by a cruel fatality exposed after death to the vulgar gaze of these sacrilegious men. The worm had not outraged the fair lineaments, and the modesty of the beautiful features struck such remorse into the hearts of the plunderers, that filled with pity and shame they immediately covered up the grave, and no one has ever since been impious enough to violate its sanctity. These two tombs are adorned both externally and in the interior with slabs of white marble, having sentences of the qurán sculptured on them. I looked in vain for any inscriptions which would certify to the occupants of the buildings, as I have heard them ascribed to different individuals than those to whom I have assigned them.

Of the other tombs, one to Ismael Khan Rumi' occupies a conspicuous situation, the crest of one of the hills of the old city. Of the

history of the KHAN I am ignorant. I was equally unsuccessful in learning any thing regarding the cemeteries of two saints, PI'R MACHAM and SHAH DAWEL, both of which are beautifully situated in groves outside the city. A singular superstition is connected with the burial place of a third saint, PI'R KHIR, or as he is more properly called PI'R KARRA ; the last name originating in the belief that before the suppliant at the tomb can take rest, his wishes are granted.

Women desirous of progeny bake four flat cakes of flour, and crowning them with small pieces of meat and fruits, set them floating in a baolí near the tomb. If the saint is propitious, two are said to sink, and the other two having been first carried to the opposite side of the well, return back to the happy votaress.

As a not inaccurate method of calculating the Musalmán population of an Indian city, I visited on the *Bakríd*, the *idgáh* at which all the faithful are sure to be present, whom age and sickness have not confined to the house*.

An immense crowd had assembled but a large proportion of it was composed of idle spectators, or petty merchants, and I should not suppose that the number of Musalmáns was greater than 2,000.

The Musalmáns agree better with the idol-loving Hindus, than with the followers of their own prophet, the *bohras*.

The Mahrattas and Musalmáns, indeed have in a strange manner amalgamated their religions. AMI'R KHÁN paid a brahman to pray for him at *Rashkar :* HOLKAR always provides two tazeeas at the moharram, and gives presents to the water-carriers, while many of the Mahrattas appear dressed in green turbans, &c. on the katil ká rát. But the *bohra* can never conceal his opinions, is for every blurting out his creed, and seems longing to have a hearty curse at the three caliphs. Their chief mullá was my constant companion during my visit to *Oujein*. Sitting on one occasion with a munshi and myself, he asked interminable questions regarding our manners and customs. But the day was hot and the mullá is old : he grew sleepy : " Iladmirait tonjours mais is bailloit quel que fois" and every yawn was finished off with a piously prolonged Y—a A—l—i. These exclamations became at last so frequent that I could perceive my munshi wincing under the infliction, and he told me afterwards that he should have been much offended " but he's an old man and thank God I've seen the world." As might be expected quarrels between the bohras and sunnís, are not unfrequent, and in a fray which occurred at *Mandiswara* a few years ago,

* This method will not apply to a cantonment, where each regiment has its private praying-place.

the chief mullá narrowly escaped with his life*. A sunní will not recieve a glass of water from a bohra, unless poured out before his eyes from the latter's lotá, who would it is declared, certainly spit in it if the other turned his back for a moment.

The early history of the bohras is involved in much obscurity: Malcolm, who asserts that they are descended from the Hassanís, has not informed us, whether he derived his knowledge from common report, or written authorities, and omits to notice that Colebrooke and others have on strong grounds† disputed that extraction.

Of this interesting tribe, I at one time entertained a hope of being able to send you a more satisfactory history, than can be gleaned from the accompanying meagre notes: for on paying a visit to the chief mullá's house, I was delighted with the sight of nearly 200 volumes of Arabic lore, from which he promised to permit me to make whatever extracts I pleased. But the mullá is old, cautious and avaricious, and though still profuse of his promises of giving me the use of his library, I have not as yet been able to procure even a catalogue of it, and the scanty information which in answer to my queries, and to whet my curiosity, he sends me piecemeal, in letters, is of that description, which the Hindus call, *A'tpatáng*, in which nec pes, nec caput, &c.‡ Perhaps, however, he tells little, because he has little to tell. I am the more inclined to this suspicion, from the nature of a few extracts, hastily made, from two or three books which he pointed out to me, as the most respectable authority on the subject of his creed. Of the value of these you may judge from the following specimen§.

"A man, named Yaku'b, obliged to quit his country from some domestic or party feud, was the first of his sect who put his foot in India, having left *Egypt* and landed at *Cambat*, A. H. 532, A. D. 1137.

* See Heber's Journal, vol. II.

† Their not rejecting the last five Imams, their peaceable pursuits, &c.

‡ He promises to pay me a visit in the cold weather bringing all his books. Should he not fail me, I will send you notice of any thing I may find curious in them: D. Herbelot mentions a few histories of *Yemen* for which I inquired, but the mullá did not seem to know of them. I remember the titles of a few of the bohra MSS. منتزع الاخبار عيون الاخيار شرح الاخيار.

§ The extracts, mere rough translations, are distinguished by inverted commas. Of the history of the sect before 532, I am ashamed to send but in a note the confused story of the mullá. The first Persian apparently of whom their chronicles speak, is one "Soleyman Farsee," who emigrated from *Fars* or *Hamadan*, (I suppose to Arabia,) and was the bosom friend of (there a word seems wanting) "Bin Mahomed il Mustapha." ?

At this time, the chief mullá of the sect, (which had been for some years settled in *Yemen,)* was ZOHEIB BIN MUSA. Egypt obeyed the rule of the caliph MOSTEMSIR BILLAH, and SADRAS SINGH governed the Hindu kingdom of *Píranpatam.*"

Now MOSTEMSIR, say most authorities, died A. H. 487, and his grandson HAFEDH, the 11th caliph, reigned from 524 to 544.

The *Guzerát* chronicles, though very confused at this period, agree better with the above date; for SIDDHA, or JAYA SINGH, of which SADRAS may be a corruption, was king of *Anhulwaranpatam* in 1094. YAKU'B having landed at *Cambay,* was received into the house of a máli named KELA, whose hospitality to a stranger soon met a reward, for the garden-well becoming dry, the prayers of his guest caused water again to rise in it. The gardener naturally approving of such a convenient faith, immediately adopted it, and YAKU'B learning the Gujeráti language with surprising quickness, soon gained as a second proselyte, a boy the son of a brahman.

The king SADRAS, and his two dewans, the brothers TÁRMALL and BÁRMALL, used to pay frequent visits to *Cambat,* for the purpose of performing pujá at a temple, much celebrated for an iron elephant, which hung in mid air, a *chamakpan* having been let into the roof above it. The zealous YAKU'B caused a block of stone to be cut to the size and shape of the loadstone, removed the original slab, and substituting his own, the elephant of course fell to the ground*. The daring author of the profanation, who made no secret of it, but when they were eagerly searching for him, boastfully exclaimed, "adsum qui feci," would have been immediately sacrificed to the rage of the idolators, but he represented that it was folly to put him to death, merely because he was more powerful than their god, of which he had already given them one proof, and of which he was prepared to offer another. Let your god said he, dry up that tank, if he succeed kill me; if he fail acknowledge my superiority. The eloquence of the preacher touched the simple Indians, who consented with joy to the trial; but

* It will immediately occur to your recollection that the *Gaznavide* MAHMUD performed the feat in the same country; Dow, i. 71. The story is a very old one, and BAYLE in his article "Mahomet" gives some amusing quotations on the subject.

YAKU'B might have learnt the secret at *Alexandria,* where in the temple of Serapis there was a similar argumentum demonis.—Sed cum quidam dei servus inspiratus id intellexisset magnetem lapidem e camera subtstroxit, &c. &c. PRIDEAUX, who had a large faith, and others have argued upon the possibility of the suspension.

in vain the brahmans, like the priests of old, called on the name of their BAAL, from morn even unto night, saying, BAAL, hear us. Their lord was peradventure asleep, for he heard them not, and the waters remained unmoved and undisturbed. YAKU'B stood by, like ELIJA, and mocked them, and when at last in despair they relinquished their fruitless task, he by a few prayers and incantations caused the waters to retire. I have dwelt the longer upon this fable because it confirms the fact of a connexion with *Egypt**, by the singular coincidence of the drying up of the tank, with a well known superstition peculiar to that country. In DE SACY'S *Abd Allatif* the curious may read the whole process by which the African magicians absorbed water; a small image, the letters T and H, some string, a little pigeon's blood, &c. being the simple ingredients of their talisman†.

But YAKU'B's skill was not confined to depriving a pool of its water. At the king's request he again replenished the exhausted tank, and SADRAS and his court, won by such a succession of miracles, embraced the religion of their author. "Of a truth" says SADI, "every one is born with a disposition to Islámism." The inhabitants of the neighbourhood soon followed the example of their lords, and in a few days a numerous population was repeating the *Imámiyeh kulma*. The Indian converts, who being generally merchants, were distinguished by the name of *bohras (byohar*, traffic) were obliged, from their ignorance of Arabic, to refer to their brethren at *Yemen* whom they looked up to as superiors in all questions regarding the laws and ceremonies of their religion, just as the Parsís of *Hindustán* obtained their *revaiuts* from the more learned guebres of *Yezd*. As it is the duty also of every Bohra to perform once in his life a haj to his chief mullá, an active intercourse subsisted between *Yemen* and *Cambay*, the pious pilgrims doubtless mingling some attention to interest with their spiritual functions‡, and in going and returning

* Yeman was at this period a tributary of Egypt.

† See fourth appendix to the *Relation de Egypte*. The verses which contain the mystery are too long for insertion here, excepting the opening lines which have an amusing solemnity. "Toi qui desires apprendre le secret de faire absorber les eaux ecoute les paroles de verité que t'enseigne un homme bien instruit," &c. The object of drying up water was to uncover hidden treasure, the letter T was always used in African magic, it was the figure of the cross with which the height of the Nile was measured, what H signified I cannot remember. You will have remarked that the names *Kela* and *Chamakpán (Chambaka pathar)*, are Hindi, though the work from which I extracted them was Arabic.

‡ That such has been the practice from the days of the Crusade till the present time, see ROBERTSON'S disquisition.

providing such an assortment of goods as enriched both themselves and the Yemenites.

A mutual interchange of good offices thus established, it is not surprising that the latter when driven from Arabia by some revolution should have sought refuge with their Indian brethren, by whom as was expected, they were honorably and affectionately received. The whole tribe with the exception of a *few who are said to have fled into Persia*, perhaps in gratitude to their hosts or from similarity of pursuits, adopted on their arrival in India the name of bohras, assumed their dress and learnt their language. The old mullá had been enumerating to me in guttural tones the chief priests from 532 to the date of the final settlement in India, insisting that I should write them all down though they consisted of such fatiguing long names as "*Sayyad ya faqir uddín, Abdullah bin ali bin Muhamed bin Hátem*" and was about to tell me the date of the emigration, when I assured him that he need not trouble himself as I had an infallible method of discovering it. Making them some shew of figures and circles I multiplied the number of mullás 23 by 17, and the product came singularly near the truth, for the grand emigration was in 946. It was amusing to witness the old man's astonishment; every visitor who dropped in, mullás and others he eagerly told of the wonderful calculation. They all elevated their eyebrows stroked their breasts and drawled out a Yá Ali*.

The troubles which obliged the bohras to leave "happy Arabia" are doubtless connected with the invasion of the Turkish emperor SOLEIMAN, who in 1538 conquered the kingdom of *Yemen*†. Of this event we have no very detailed account, and perhaps the bohra chronicles will throw light upon CANTEMIR's meagre notice‡. The *Guzerát* historians of this period are too busy with the murders and depositions of the last weak kings of *Ahmedabad* to remark the entrance into the country of a few poor fugitives, and the bohras,

* I had shortened TOD's average of reigns as an adult only can succeed to the *bohra-gaddi*, but my average was too little; for the succeeding period it would have been too long, for as there were 22 priests 14 would be nearer the average of each reign.

† The Turkish troops followed the steps of the fugitives, for it was in this year that they made an attack upon *Diu* when four lamps suspended to the mast of every ship of the Portuguese fleet frightened the gallant army from the Indian shores.

‡ A work mentioned in D. HERBELOT's article *Jaman* would probably describe the event at large, as it was written but a few years afterwards.

sheltered in their insignificance, do not seem to have been hindered*, and probably profited by the troubled state of the kingdom, and soon spread themselves over *Guzerat* and *Hindustan* settling at *Surat, Ahmedabad, Sidpore, Burhanpore, Oujein* and *Rampura*. Their numbers at present may be roughly estimated at 100,000 souls†.

The most remarkable person of the sect at *Oujein*, is decidedly their head mullá, Esau, to whom all Europeans apply for information on visiting the city, for as he has resided there about 40 years; he is a living chronicle of the "times of trouble" and to boot like Crebillon's Sháh Bahmun, 'il est sans contredit l'homme de sa ville qui possède le mieux l'histoire des événemens qui ne sont jamais arrivés.'

It is a mistake to suppose that he partakes of any of the divine authority with which the bohras invest their chief priest, of whose orders he is merely the organ; nor has he any particular respect paid him by his flock; for as we walked together at a melá, where numbers of them were assembled, I remarked that they almost all passed him without notice or salutation. He seemed to guess my thoughts, and said rather tartly, 'we are a plain people, not addicted to bowing and scraping.'

The succession among the chief priests, is solely determined by the will of the reigning mullá, who in case of incapacity in his own family, from youth, bad conduct, &c. will transfer the honor to another house; and one of the first acts on ascending the *gaddí*, is to nominate the next heir to it. The last mullá, who was the *saggá* brother of mullá Esau, died in the beginning of March, and was succeeded by Mahomed Badar u'ddi'n who is about 27 years of age. The bohras have three separate wards in *Oujein*, or as they themselves count them five, for two are large and double. Their religious buildings are hardly worth visiting except perhaps one mosque, to which is attached a low, small, dark room where rest the remains of 7 or 8 of their chief mullás: the tombs are placed side by side, on a raised foundation of fine white marble, on which verses of the qurán are thickly sculptured. A sort of awning is spread above them consisting of a board, into which pieces of looking glass are closely fitted together, and these with the common wall shades round the room give it the neat but tawdry appearance which characterises their shops. When lighted up on festivals, it may look gay enough, but on common days, its only ornament, the pure marble (to preserve

* There is a slight allusion to their having been expelled from *Sidpore* and *Ahmedabad*.

† I speak from native authority, without means of confirming it.

it from injury) is concealed under stuffed rezáis, so that the place altogether presented but a mean and shabby appearance; though of course I expressed with uplifted hands and eyes all the admiration I was expected to feel.

A Persian historian quoted by COLEBROOKE tells us that many bohras were converted in the orthodox tenets by the first Musalman king of *Guzerát* in 1391: but the "Arguments" of the traditionists, (we may guess their nature) doubtless prevailed only so long as they had the power of enforcing them; for I am assured, that there is not at present a single sunní included in the sect. They appear with a few ceremonial exceptions to be strictly shíahs; and reverence the six last Imáms which distinguishes them from Ismaelís. Their burial-grounds have a pleasing appearance, the tombs being regularly arranged in streets east and west. The tombs themselves, which are of course north and south, the corpse resting on its right side, differ in no respects from those of sunnís, with the exception of a small *chirágh takía* cut out of the north face, just like the cavity for the inscription of our own tombs. In a churchyard of this description at *Kargaon* I counted more than 1000 tombs ranged in about nine streets, some of them for children smaller than the rest, and one, covered with a singularly elegant, though perhaps tawdrily painted dome. They formerly, we are told, sent a fifth of their gains to the Sayyads of *Medina*, but a practice which imposed such a strain on the conscience could not have been expected long to obtain, among a money-loving people. Now and then perhaps a twinge of conscience, may induce the driver of a hard bargain to devote a pittance of his gains, to the holy Sayyads, but this is a voluntary, unusual, and supererogatory act of piety. Like other shíahs, they pray singly without an Imám. At their devotions they use a particular dress which consists of a *tahband*, a *chadar* thrown over their shoulders, and a small dark-colored cap, some adding to this a sort of surtout. After praying they wrap up the clothes in the *mosalla* or praying carpet. They are not so nice with respect to the cleanliness of this dress as COLEBROOKE supposed, for all that is required is that it shall be washed by their own hands after coming from the not sufficiently orthodox fingers of the *dhobí*, but it is only again changed, when become even in *their eyes*, dirty, or when it may have acquired a peculiar defilement*. So cleanly a precept as that of daily washing it, would be an exception to their general habits; for they are a very

* Quum crepitum ventris ediderint. They have generally two sets of this dress one of which is always kept at the mosque.

dirty people, wearing usually colored drawers, which they seldom wash, and do not change till they fall off in rags. Their houses seemed certainly neat, and a tiffin of which I partook at the mullá's was served up in the European fashion, in very clean-looking dishes, but the narrow and sometimes covered streets of their wards teem with every sort of filth. In this last respect they but copy their fellow-citizens of *Oujein*, than which I have rarely met a dirtier city: even in the dry weather mud a foot deep covers most of the streets, and disgusting sights and smells offend at every corner.

I must not omit to notice that a fine of 20 cowries (rich and poor pay equally) punishes the non-attendance of a bohra at the daily prayers. A larger sum is exacted for remissness during the Ramzán, and it is said that the dread of this small loss operates powerfully upon a class of men who are particularly penny-wise. The money collected thus is transmitted by the *Oujein* mullá to his chief at *Surat**, who devotes it to religious purposes, such as repairing or building mosques, assisting the needy of his subjects, and the like. Several other offences have the same characteristic punishment, such as fornication, drunkenness, &c. But the cunning bohras elude many of the fines, and daily indulge in practices not sanctioned by their creed; thus in their shops pictures and figures may be purchased, though it is against the commandments to sell the likeness of any living thing. I cannot learn how the chief mullá is supported, but I am told that the heavenly passport he was supposed to furnish, is an idle fable, and every bohra to whom you speak on the subject begins to curse and to swear, and to exclaim that it is a lie.

An excellent bird's eye view of *Oujein* is obtained from the *Goga-shehíd*, an isolated hill in the south-east quarter of the city. The name has its origin in one of the numerous versions of the tale of the throne of VIKRAMÁDITYA being discovered by RÁJA BHOJ. A case, which, to use the words of the Indian narrator, had made the rája bite his nails, was at once decided by a shepherd boy who was playing with his companions at the game of king, seated on a mimic throne on the top of the hill. The rája sent for the young lawyer who refused to stir from his judgment seat, and an armed party attempting to bring him by force, he defended himself gallantly, and at last overpowered with numbers and wounds fell lifeless on his throne of earth†. The

* The chief priests have of late years lived at *Surat*, but, their place of residence is in their own option and has been often changed.

† HUNTER misled by the word *Shehíd* mistakes *Goga* for a Musalman saint, or perhaps he confounded him with RAMASSEH PI'R, also called GOGA PI'R, who was killed near *Poshkar*. See MALCOLM's Central India, 2 : 177.

rája could not repress his sorrow at the death of the wonderful child till consoled by the suggestion of the vizir, that some virtue concealed in the hill, could alone have converted an ignorant cow-boy into a sage and a hero. An excavation being accordingly made, the magic throne with its lion supporters and 32 speaking puppets was brought to light*.

Mounted on this hill and turning to the west the eye is first attracted by a staring white wall standing alone, and like some huge target actually riddled with balls. This is all that remains of the palace of the restless PÁTANGAR whose singular history is doubtless not unknown to you. He imposed the same restriction upon his son and daughter-in-law as that with which BLANCHE persecuted St. LOUIS and his queen. In strange contrast, a bulky black building appears to the right of the last, wearing that dismal look peculiar to a house which has been long unoccupied. And is it quite uninhabited then? I asked a bystander. Oh no! was his answer, it is full of jins. A Musalman lad just then came up, riding a small pony (he once rode elephants, said one of his attendants in a loud voice but *jaisa háú taisá diya)*, and begged to offer me his salám. From him I learnt that the sombre building had been the residence of the BHAO BAKSHI, the old gentleman, he assured me, might still be seen by the curious, squatted at midnight in the centre of the deserted hall, counting his money bags:—but the intruder would rue his temerity; for before he could leave the house, jins and demons would drive his senses out of him.

My new acquaintance with a justifiable pride, begged me to observe that the minarets of the mosques of A'DIL and CHAMMAN BEG, overtopped every building in the city. Even the golden *kalasa* of *Mahákál* which glitters in the distance can hardly dispute the preeminence.

The observatory of JEY SINGH may be distinguished to the S. W. HUNTER's minute description renders a further notice unnecessary†. The wall of the great quadrant is still standing though its circles are nearly obliterated‡. Did they remain they would but be thrown away at *Oujein* which has long ceased to be the abode of science.

* I have abridged a long tale, as the same or its fellow may be found in such common books as the *Batíísi Singhásan*, &c. Most of them make *Dhár* the site of the *Singhásan*, and the inhabitants of that city boast their hill and their tradition.

† Asiatic Researches, vol. 5.

‡ The circles in the tiled building are probably still distinct, but I unfortunately forgot their existence till I had left the place.

In answer to my inquiries for a Jyoshí, I was informed that there was not one in the city fit to speak to a sáhib*, nor could I meet with a single person who had ever even heard of the *jantra* of VIKRAMÁDITYA. To determine the site of this would-be curious, for it would in some measure fix the position of the ancient city, and from BABER's notice†, the observatory would seem to have been standing in his time.

Still posted on the hill and looking around the eye falls on a confused mass of buildings among which the palace of the *Scindias* and of the *Romasilar* can alone be distinguished. To the north trees confine the view, shutting out some of the most populous districts, and rendering it impossible from the coup d'œil to guess at the number of houses so as to form some estimate of the population of the city. I was furnished for that purpose with a lengthy list of the mahals, which proved equally unsatisfactory, for some of them exist only in name and others have hardly an inhabitant. The Musalman names of a large proportion shewed the bygone influence of that sect. *Oujein* seems gradually retrograding to its ancient site, most of the southern quarter of the city being deserted, owing apparently to the little elevation of the banks of the river on that side which must occasion them to be frequently overflowed in the rains. To balance this the hillsof the "*Juni*" are slowly becoming covered with *Nyapuris* without end.

When JACQUEMONT was at *Oujein*, he requested three of the principal authorities who chanced to be sitting with him to write down separately what they supposed to be the population of the city. I forget the extravagant figures they guessed, but two of them who had been at *Benares*, calculated the number of the inhabitants of that city, the one at 50, the other at 20 lacs. JACQUEMONT then produced your moderate census which of course they assented to and disbelieved. One of the party the chief mullá of the bohras, asked me if it was correct. I told him the story of the rája who challenged its accuracy

* That I was not misinformed, see Journal As. Soc. 3 : 508. I had been desirous of making inquiries regarding the very curious meteor mentioned in your Journal, 6 : 79. It may interest you to know that it was seen (and as far as I can learn at the same moment) at *Nimach* and at *Mahidpore* to the south ; at *Rajwass*, to the northwest, (I may perhaps err here, for I have lost my note of it ;) and at *Mhow* and *Hussingabad* to the north and presented at all these places exactly the same appearance. The beautiful sketches accompanying were drawn by Lieut. KEWNEY who saw the meteor at *Hussingabad*. (We regret the impossibility of introducing these colored sketches.—ED.)

† ERSKINE's Baber 51, the emperor seems puzzled between *Oujein* and *Dhár*. Where is there any notice of the old observatory ?

and whom you convinced in spite of his teeth by a reference to his own establishment. Do you remember that scene? The indignation of your friend at the number of 52 assigned to his family, his boast that it contained three times 52, and the difficulty he found at last in eking out even your tale, by two old beggar women who slept at his gate? If the more enlightened *Benares* folks were so incredulous and ignorant, you could not expect much assistance in such calculations from the Goths of *Oujein*. The number of residents I would roughly estimate at 70,000. The theories which account for the change of site of *Oujein* appear to me all equally unsatisfactory—I neither believe with HUNTER that a shower of earth, nor with MALCOLM that a flood, overwhelmed the old city, nor with the natives that it was turned topsy turvy. The tales of old bricks and of wood of surprising hardness, &c. dug up at depths of fifteen feet seem to smack of the *Oujein* failing of exaggeration. Several people were interrogated who had been twenty and thirty years at the place, none of them had ever positively seen such things, though all believed most religiously both these and much more wonderful curiosities to be found. It is currently told, that a chamber was discovered in which was seated the skin of a beautiful lady, just, explained my informant, like the shape of a grasshopper which you see trembling on a stalk of grass in the dry weather. Some incautious visitor approached too near the delicate shell, it vanished into air—like the fish found in the pyramids,—"comme de la poussière qui s'envole quand au souffle dessus." Bricks found at any depth would prove little, for they might have belonged to walls which stood on the slope of a hollow, filled up by time; many of the houses of the present town being built in this fashion to save the trouble of making a back wall, or they might have belonged to under ground granaries, tahkhánehs, or wells. A shower not exactly like the famed one of bricks and tiles*, but one equally composed of building materials, such as rained, says ASSEMANI, in 769, "Une pluie de pierres noires," seems as likely to have fallen, here, as earth or sand.

The surface of the hills (of the old city) where it has not been ploughed and picked is strewed with fragments of stone, just as you would expect in a place which had once been covered with houses: these broken pieces of trap being parts of walls of which the larger companions have been taken away as material for other buildings.

The theory of an inundation is principally supported by a tradition that the river has changed its bed. This belief seems to me a native

* PLINY, where the date is gravely given.

fabrication to account for a square, tall, brick building, which resembles the wells so frequently found near the banks of the river. It is situated in a hollow through which the river is said formerly to have flowed, and which is perhaps merely the dried-up channel of some nullah. Of the name of the well *Bíbí Mako* I could get no more satisfactory explanation than that the words are convenient for the repetition of the echo. Every little idle urchin runs into the square and bawls out *Bíbí Mako* with a drawl on the o, and is equally frightened and delighted with the reply of *Bibi Mako*. One argument is conclusive against an inundation: that the hills on which stood the old city are higher ground than the level of the present town, and that the latter is the more likely also to be overflowed. Indeed no such extravagant theories are required to account for the desertion of the first occupied spot. The whim of the reigning prince is sufficient to determine the position of any oriental town, of which we cannot look around without observing instances, as at *Delhi, Lucknow, Maheswar*, &c. And that coins and antiques should be picked up, is not a whit more extraordinary than the annual harvest of such curiosities at *Beghram* and *Canouj*, &c. towns, the last of which at least, was gradually deserted.

Romance lovers would be shocked at my theory of the origin of the so-called rája BHIRTRI's caves. The natives are in the habit of excavating the foot of the hills of the old city for an excellent clay of which there is a thick and extensive bed. Any one who has resided at *Delhi* will remember the excavations there for the same purpose, which have not unfrequently been converted into agreeable tahkhánehs. One of those at *Oujein* nearly rivals in extent, BHIRTRI's retreat, is supported by arches cut out of the clay and is divided into several chambers. Such was probably the origin of the great caves, which are very low, and not of any great extent*. They are supported by pillars, clumsy, but massive, and the walls and ceilings are lined with enormous blocks of stone calculated, it might be thought, "to fatigue time." But they will shortly be crushed by their own weight; already one room has fallen in, and some of the slabs are in such a position that at first sight it does not seem safe to walk under them. What may have been the primary object of the buildings is matter of question. The natives contend that it was rája BHIRTRI's hermitage, but their own fables refute them, for we read that the rája immediately after swallowing the *amar phal* set out on his travels. In no place did he allow his weary limbs long to rest, though he halted at *Sehwan* on the

* The dimensions may be seen in HUNTER.

Indus, at *Bhartewar* near *Khyroda*, at *Chunar* and *Benares*, and to this day he is believed to be still wandering about, among the *Hyperboreans* beyond the *Himálayas*. A late writer* imagines it to have been the dwelling place of rája BHIRTRI'. There is, however, no appearance of its having been built to live in. BHIRTRI' would have run the risk of breaking his head or his shins, every time he rose up, or walked, in his low-roofed unevenly-floored mansion†. The pillars too are sculptured on only three sides, that side which faces the wall, and which would not be seen by one passing through the caves, not having been even smoothly chiselled.

The antiquity of the caves will be much lessened‡, if from the first they were furnished in the same fashion as the present, for they are now evidently ling temples. The figures on the pillars, are small, much defaced, and were originally far from being deeply carved, but there is no difficulty in recognizing them for those indecent groupes which mark the temple of *Shiva*. Several lings are scattered about, though one only seems to be worshipped a *Kedareswar*, 'lord of cedars.' Marks of feet engraved on the rock are not unfrequent. At the end of the left cave on a slab of black stone about three feet high and one broad, two figures (one over the other), are cut, sitting cross-legged, performing tapasya. The upper one is called *Gorakhnáth*, the lower, his pulpil *Bhirtrí*.

Near the entrance lies a huge head of a *Rákshasa*, and the ghát below takes its name from a gigantic stone image of *Kapila muni*, which leans against the bank half buried in sand.

The quantity of antiques collected amongst the ruins of Indian cities has always seemed to me a subject of wonder. The supply from the old *Oujein* is so constant and plentiful that the natives call the place by the appropriate name of *Rozgár ká sadábirt*, and it is in truth a never failing charity for the industrious poor. In the idle days of the rains the digging begins. The principal things found are glass, stone, and wooden, beads, small jewels of little value, seals, (agate and cornelian,) and a few women's ornaments; copper coins are numerous, next in number are the debased silver *Guzerátí* ones. Pure silver rupees seem scarce, and gold mohurs are either secreted and melted when found, or they but rarely reward the searcher, for I was only able

* The author of the paper before alluded to in the E. I. United Service Journ.

† The caves seem by their position to be exposed to inundation which alone would have unfitted them for houses, and may have been the cause of their having been so solidly built. An outer court, though very strongly constructed has been partly thrown down apparently by the swell of the river.

‡ That is, according to COLEBROOKE's theory, which however seems to have now but few followers.

to procure one and that a doubtful specimen. As the pilgrims carry away with them, as relics, what has been dug out of the *Juní-garh*, the merchants mix with the real antiques every old bead or piece of copper which has an ancient look, and pass them off as genuine on the unsuspicious natives. One man brought me a large heap of copper seals or plates of chaprásses which had engraved on them modern Musalman and Mahratta names, and was ready to take his oath that they had been dug up, which perhaps they were, for he had probably buried them that they might have the appearance at least of age. Steatite "*Náddlís*" are also frequently brought for sale, some of them as old-looking as if they had really been buried with the city. I send you one as a specimen.

Sometimes the owner of an antique cannot be induced to part with it. I was told of a baniah who had a fine elephant coin, but to my request that he would sell it me at any price, he urged that ever since it had been in his possession, he had been invariably lucky. At length he consented to let me look at his treasure,—it was a bright new fanam!

The difficulty of making a collection of coins in *Málwá* is very much increased by the infinite variety of the currency. Every petty town has or had its separate mint, and the larger ones occasionally alter their type, so that when the impression has worn away, it is difficult to tell whether your specimen is an antique, or has been struck at a place a few miles from you. The bankers can give no assistance, they only look to the value of the piece, and care not for its author.

Even when we have secured a coin of whose antiquity we are assured, it affords but little of that satisfaction which rewards Mr. Masson's* labours. The surface of every silver *Saurashtra* coin I have procured has scaled off, leaving little of the impression perceptible; and out of several hundred of the pyce (I have called them), there is not a single specimen in which the letters, which seem to have been round the edges, are not worn away and illegible. In introducing to you my poor collection of antiques, I will commence on the approved principle of "at the beginning setting forth the best wine."

An intelligent munshi, who jealous of Kera'mat Ali's fame has become an eager antiquary, informed me one morning that he had

* I had drawn up a few notes upon that gentleman's collection, but my paper has so swelled "Eundo" that I must defer them to another opportunity. Let me however assist him out of one trifling difficulty. In the second memoir he is perplexed by the differences of the amount, and modern calculations of distance in *Afghanistan*. But the measurements seem in fact the same, for the Roman geographers in writing of Asia always make the distance too great from dividing the stages of the Grecian authors they copied, by eight instead of 9½, when reducing them into Roman miles: either Rennel or Denville discovered this.

procured a *Soleymani* with characters so well engraved on it, as to remind him of the writing of YAQU'B REKUM KHÁN ; a *Delhi* worthy, such a master of his pen, that a beggar asking alms of him, he wrote one letter on a slip of paper and threw it to the fortunate fellow, who gained a livelihood by shewing it. The munshi's treasure, which with much pomp and circumstance he unfolded from as many wrappers as bind his Koran, was the enclosed agate. I can make nothing of the character, though it bears some resemblance to the *Guzerátí Nágari*. When deciphered it will I fear give little or no information as the letters can hardly form more than one word, which will doubtless prove to be of some unknown.

[This seal was lithographed in Plate XXXVI. see page 680, where it is read as *Srí Vaṭi khuddasya*. Mr. B. ELLIOT of *Patna*, has one similar to it in type but much smaller, which bears the legend *Srí Yokachhávasya*, the seal of YOKACHHAVAS, a name equally strange and un-Indian. Some of the insulated names on the *Allahabad* pillar are in the same style: but this is not the place to treat of them, as it is indispensable to have facsimiles before the eye while describing them. For the same reason we withhold (under permission) the author's notes on the several classes of coins collected by himself at *Oujein* and in its neighbourhood, of which he has most liberally favored us with many very curious and well preserved specimens. We hope soon to be able to engrave this series, which is rich in varieties. The name should embrace those coins having on one side four circles, single or double, connected by a cross, of which examples have already appeared amongst Colonel STACY'S Buddhist specimens. *Oujein* is also rich in what we have called the *Saurashtra* series, and still more so as might be expected, in the *gadia paisa* attributed to VIKRAMA'DITYA. We conclude Lieutenant CONOLLY'S journal with his description of an image visited on his return from *Oujein*.—ED.]

My pandit was so lavish in his praises of an image of CHAMUNDA at *Dewass* that on my way back to the cantonments I made a detour to visit it. A fatiguing walk up a hill some 400 feet high brought me to the boasted fane. The image a gigantic figure, cut out of the solid rock which slants inwards, forming a natural temple, is perfectly adapted to the native taste, being as fine as colors and tinsel can make it. A large daub of red and yellow paint is intended to represent a red canopy, sprinkled with silver spangles and bordered with gold and silver flowers. The face is red, the paijámas are red with gold spangles. The boddice and the huge earrings mimic gold, and rings of real brass hang from the cheeks and nose, the latter proving the image to be modern*. The upper right hand holds a flaming sword over her head, in the position called "forward." The trisul in her lower right hand is inverted, to strike the wretched *daitya* from whom

* According to ERSKINE, in his paper on *Elephanta* in the Bombay Transactions.

she borrows her name, who looks as pale, as silver tinsel can make him. One of her left hands grasps a club *(gadá)*, the other a yellow *rapper*. Her *vahan* is a goose, rara avis, red turned up with white. A tiger lies crouched at her feet. This idol is much esteemed. The rájas of *Dewass* pay it regular visits, ground is set apart for its support, and for 30 miles round; every poor woman who hopes to be called "mother" pays her devotion at the shrine, and fixes a cow-dung *swastica*, on the rock. As you descend the hill, the capital of the great state of *Dewass*, a city of huts, delights the eye; no tree obscures the view; could SADI have seen it, with its two rájas, two courts, two palaces and two *saddars*, he would have retracted his stanza of the "*Do Dervaish.*" "Quid si vidisset Democritus?"

III.—*Account of the Tooth relic of Ceylon, supposed to be alluded to in the opening passage of the Feroz lát inscription. By the Hon'ble* GEORGE TURNOUR, *Esq. Ceylon Civil Service.*

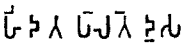
Mr. PRINSEP has, doubtless, already explained to the Asiatic Society, the circumstances under which he has been enabled to render another important service to the cause of oriental research, by the discovery of the alphabet in which the inscriptions engraven on the columns at *Delhi*, *Allahabad*, *Patna* and *Bettiah* (all precisely of the same tenor and in the same character); as well as the inscriptions found on various other monuments of antiquity scattered over different parts of India, are recorded. When, on the one hand, the multiplicity of these ancient monuments, still extant in *Asia*, is considered; and on the other, it is found that the age in which, and the object for which, these inscriptions were engraven, have been shrouded under an impenetrable veil, for centuries past, some idea may be formed, even by those who have not devoted themselves to investigations of this nature, of the possible extent of the application of this discovery; and the consequent value of the service rendered. In the department more especially of numismatics, in which Mr. PRINSEP's researches have been so eminently successful, he has already shown in the May Journal of the Asiatic Society, the only number published since his discovery, the important results to which that discovery is destined to lead, in that branch also of Asiatic investigation.

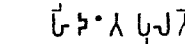
Finding that the alphabet thus deciphered bore a close affinity to that in which some of the ancient inscriptions in *Ceylon* are inscribed; and at once perceiving that the language in which the hitherto undeciphered inscriptions on the columns above mentioned were composed was the *Mágadhi* or *Páli*, Mr. PRINSEP lost no time in imparting his discovery to me; coupled with the request that I would furnish him

with a translation of the inscriptions on the *Delhí lát*; facsimiles of which are published in vol. VII. of the Asiatic Researches.

These facsimiles are, for the most part, executed with so much fidelity; and in the few instances in which one letter has been mistaken for another, and symbols have been misapplied or omitted, the inaccuracies are so readily corrected, by conformity either to the grammatical construction of the language, or to the obvious signification of each passage; that the task assigned to me has been as facile, as the interest kept up to the last moment, in the expectation that some specific date, or historical data, would ultimately be developed, was intensely engrossing.

The only faulty fraction of these four inscriptions (each facing one of the cardinal points of the compass) in regard to the revision, of which I entertain any serious doubt, is the first moiety of the third line in the inscription fronting the north; and it so happens that it is precisely those three words which embody the explanation of the main object had in view in recording these inscriptions.

To these all-important words in the identical letters in which they are represented in the facsimile, I am not able to attach any signification, commensurate, or in keeping with designs of sufficient magnitude to have led to the erection of columns, such as these, at places so celebrated, and so remote from each other, as *Delhi*, *Allahabad*, *Patna* and *Bettiah*. Those three words as exhibited in the facsimile are  . If, however, on re-examination of the columns it should be found that the correct reading is



and the correction, it will be seen, only involves the variation of a few minute symbols, easily misread in an ancient inscription, and the substitution of the letter for which also might be allowably confounded in the transcript, it will scarcely be possible to exaggerate the importance of the results produced, in reference to the interesting historical information which these inscriptions would, in that case, develope. Besides enabling us to fix the date of the record, and to identify the recording emperor, it will satisfactorily confirm the authenticity of certain Buddhistical historical annals of the close of the third century of our era, professing to be *contemporaneous with the signal events they record, the most prominent of which is the conversion of the Rájadhirája, or emperor of all India of that age to Buddhism.*

It would be an idle waste of time to adduce the various hypothetical considerations which crowd around this investigation, tend-

ing to establish the identity of the events contained in these inscriptions, with those illustrated in the Buddhistical annals to which I allude. Had these monuments become defaced and illegible since the facsimiles were copied, with all my aversion to hypothesis and conjecture, I should have felt little hesitation in advocating that identity. But "*litera scripta manet*" and the question admits, therefore, of final and unimpeachable decision, by the simple process of a re-examination of these ancient monuments*.

In the sanguine expectation, however, of my reading still proving correct; and as the notes taken by me in the course of my investigation of this interesting passage of Indian history, would form an article in itself, not devoid of interest, independent of its connection with the inscriptions, I shall proceed to its explanation, reserving my remarks on the inscriptions to the last.

In *Páli* annals, among the various terms by which the TOOTH RELIC of BUDDHO is designated, "*Dasanan*" and "*Dáṭhádhátu*" are those the most frequently used. The particular TOOTH RELIC, now in question, was brought to *Ceylon* in the 9th year of the reign of the monarch SIRIME'GHAWANNO, whose reign extended from A. D. 302 to 330, in the charge of HE'MÁMÁLÁ, the daughter of GU'HASI'WO rája of *Kálinga*, whose capital was *Dantapura*, and of her husband DANTA-KUMÁRO, a prince of the *Ujjéri* royal family. From these personages, the previous history of the RELIC is stated to have been obtained, at the time of their arrival; and the *Daladáwansa* was composed in the *káwi* form in *Elu*, which is the ancient classical version of Singhalese.

While there is no circumstance discernible, as far at least as my investigation has extended, of external or internal evidence, which creates the slightest doubt as to this *Elu* work, called the *Daladáwansa*, having been compiled in the manner above mentioned, about the year A. D. 310, there is positive proof of its being extant, *at least* between A. D. 459 and 477. For MAHÁNÁMO the author of the first part of the *Maháwanso*, who flourished in that interval, in giving the history of SIRIME'GHAWANNO'S reign, in the portion of his work denominated the *Chúlawanso*, thus expresses himself in regard to the arrival of this RELIC in *Ceylon*.

* We leave this assumption for argument's sake, but the original reading cannot possibly be so changed; we have now before us an *impression* of the passage from the *Allahabad* pillar, which entirely confirms it as *Hidatapálaté Dusampaṭipádayé*: see note at the end.—ED.

" Nawamé tassa wassamhi dáṭhádhátummahésino
bráhmanikáchi ádáya Kálingamhá idhánayi.
** Dáṭhádhátussawansamhi wutténa widhiná : satan*
gahetwá bahumánéna katwá sammánamuttuman,
Pakkhipitwá karaṇḍamhi wisuddhaphalikumbhawé,
Déwánaṇpiyatisséna rájawutthumhi káriṭé,
Dhammachakkawhayé géhé waḍḍhayittha mahipati ;
tato patthúya taṇ géhaṇ Dáṭhádhátugharan ahu."

" In the ninth year of his (SIRIMÉ'GHAWANNO'S) reign, a certain bráhman princess brought the *Dáthádhátu* or TOOTH RELIC of BUDDHO, hither, from *Kálinga*, under the circumstances set forth in the *Dáthádhákawanso*. The monarch receiving charge of it himself, and rendering thereto, in the most reverential manner, the highest honors, deposited it in a casket of great purity made of " phalika" stone, and lodged it in the edifice called the *Dhammachakko*, built by DEWANANPIYATISSO."

This *Daladáwansa* compiled in the ancient *Elu* was translated into *Páli* verse, during the first of the three short-lived reigns of the queen of *Ceylon*, named LÍLÁWATÍ, who is as celebrated in the history of the island, for the vicissitudes of her career, as for being the widow of PARÁKKAMO the first, the most martial and enterprizing of all the monarches of *Ceylon*, subsequent at least to the *Wijayan* dynasty.

The translator of this work was DHAMMARAKKHITO théro, and the period embraced in LÍLÁWATÍ's first reign is from A. D. 1196 to A. D. 1200; at the termination of which, she was deposed, for the first time by SÁHASAMALLA.

The translator thus prefaces his translation of the *Páli* work; to the analysis of which I shall presently apply myself.

" As the compilers of the *Chulawanso*†, in noticing the arrival of the TOOTH RELIC (in *Ceylon*) have in a single *gáthá* only referred to the *Daladáwansa* which had been composed in *Elu* verse, and stated that for the rest of the particulars connected with the TOOTH RELIC, the *Daladáwansa* must be consulted: as that *Elu Daladáwansa* is of inconvenient magnitude, comprising the details contained in the *Parinibbána suttán* (of the *Pitakattayan*) and the account of the transmission of the TOOTH RELIC to *Kálinga :* as in those texts it is found that at the demise of BUDDHO the théro KHE'MO conveyed the TOOTH RELIC to *Kálinga:* as that *Daladáwansa* is both inconvenient in size, and from its being composed in the obsolete *Elu* dialect, its meaning is most difficult of comprehension to the Singhalese people : as the benefit resulting both in this world and in the next, from listening to it, appears to be thereby prejudiced; as both to the inhabitants of this island and of other lands on its

* " *Daladáwansa*" the *Elu* denomination of the work would necessarily in the *Páli* be converted into " *Dáṭhádhatuwanso.*"

† The passage above quoted.

being transposed into the *Mágadhi*, and on its being comprehended in that delightful language, all the benefits derivable in this world and in the next would be most fully realized,—therefore transposing the substance of the *Daladáwansa* composed in *Elá káwi* into *Mágadhi* verse, according to the prosody of that language, this *Datháḍhátuwanso* is composed in a form comprehensible to degenerated intellects."

A few leaves further on, DHAMMARAKKHITO explains that it is under the auspices of the minister, also called PARA'KKAMO, by whom LI'LA'WATI' was raised to the throne, that the translation was undertaken by him; and towards the close of the book, he gives his own name, to which the title of "*Rájaguru*" or "preceptor of royalty" is added.

In the following analysis of the *Dáthádhátuwanso*, I will endeavour to make my abridgements as concise, and my extracts as few, as a narrative exposition of its contents will admit of.

After the funeral obsequies of BUDDHO had been performed at *Kusinárá* (in the year 543 B. C.) one of his disciples KHE'MO théro is commissioned to take his *LEFT CANINE TOOTH to *Dantapura*, the capital of *Kálinga*. The reigning sovereign there, who received the RELIC, was BRAHMADATTO. He was succeeded by his son, KA'SI, who was succeeded by his son SUNANDO. These rájas are stated to have been devout Buddhists. From the undiscriminating tone in which the ensuing monarchs are stated to have "continued to make offerings to the TOOTH RELIC of the divine sage" it is reasonable to infer that, subsequently to SUNANDO's reign, Buddhism ceased to be the faith of the rulers of *Kálinga*. At all events GU'HASI'WO, who as a contemporary of the Ceylonese monarch MAHASE'NO, must have reigned, towards the close of the third century of our era, is admitted to have been of the bráhminical faith. Up to that period, therefore, the RELIC had been kept at *Dantapura* for a term of, at least, 800 years.

The circumstance of a splendid festival having been held in his capital, in honor of the RELIC, by the inhabitants of *Kálinga*, leads GU'HASI'WO into a controversial discussion with the Buddhist priests in that city, which terminates in that rája becoming a convert. With all the zeal and intolerance of recent conversion, he expels from his dominions, the ministers of the bráhminical faith, who are thenceforth called *Nighanṭá*. These discarded bráhmans repair to *Paṭilipura*, to appeal to the RA'JA'DHIRA'JA' of all *Jambudípo*, who is called PA'NDU, whether that be his individual name, or the designation of the dynasty from which he is descended, remains to be decided. The burden of their representation is that "while PA'NDU, emperor of all India, worships the deity worthily adored by all the *déwas*, GU'HASI'WO, a rája subordinate to his authority, reviling those gods, worships a piece of human bone."

PA'NDU commissions CHITTAYA'NO, another subordinate rája, it is not stated of what country, to chastise GU'HASI'WO. The commands issued are sufficiently

* I take this opportunity of correcting a note made at page 105 of my translation of the *Maháwanso*. The TOOTH RELIC there spoken of is the *right* one. I had forgot at the moment the RELIC removed from *Dantapura* to *Ceylon*, was the LEFT TOOTH.

precise and concise: "repairing to the *Kálinga* country, bring hither GU'HASI'WO and the piece of human bone, which he worships day and night." CHITTAYA'NO proceeds, with a great army, to *Dantapura*, and besieges the town. GU'HASI'WO at once makes his submission, presents CHITTAYA'NO with elephants and other tribute, and receives him with his army, into the capital. Within the palace of GU'HASI'WO, CHITTAYA'NO, delivers the commands of the emperor, which the rája of *Kálinga* receives with "feigned satisfaction." Here GU'HASI'WO enters into the history of the RELIC, as explanatory of the grounds of his conversion, as well as of his adherence to Buddhism. His relation makes a favorable impression on CHITTAYA'NO and his officers, and they proceed, from the palace to visit the RELIC temple, the splendor of which is described in glowing terms. There GU'HASI'WO opens the RELIC casket resting on his right knee, and then, with clasped hands, makes an invocation to the RELIC, rehearsing the miracles formerly performed by it, and imploring that they may be then repeated. Those miracles take place accordingly. CHITTAYA'NO and his army become converts, and make offerings.

Here the second chapter closes, and as the third is the portion of the work which furnishes, as I conceive, the evidence of the identity of PÁNDU with the monarch by whom these inscriptions were engraved, I shall furnish a literal translation of those parts of the chapter which are applicable to the subject of the present inquiry.

CHAPTER THIRD.

"CHITTAYA'NO nevertheless signified to the king of *Kálinga*, that the command of the emperor PA'NDU was inviolable. Thereupon the rája GU'HASI'WO, decorating *Dantapura*, with banners and flowers, (perfuming the streets) with incense, and intercepting the rays of the sun with a canopy of cloth, surrounded by his subjects both of the capital and from the country, with their eyes streaming with tears, raising on his own head the precious RELIC CASKET, and ascending a chariot, resplendent as the rising sun, and lined with costly variegated cloth, over which was spread the splendid white canopy (of dominion), and to which were harnessed horses, white as the cavity of shanks (shells); and followed both by an innumerable concourse of people, rolling on, like the waves of the ocean, and by the aspirations of the multitudes who remained behind at the capital, ranged himself on the high road to *Pátilipura*, which was every where, in its full length and breadth, carefully strewed with white sand, lined with filled vases (of bouquets), and festooned with (garlands of) flowers. On the journey, this protector of *Kálinga*, together with the tutelar deities of the wilderness (through which he was travelling) made daily offerings to the TOOTH RELIC of flowers, amidst dances and vocal and instrumental music. The protector of his people (GU'HASI'WO) escorting thus the TOOTH RELIC, and in due course achieving his arduous journey, across rivers and mountains, reached the city named *Pátitipura*.

"When the king of kings (PA'NDU), in the midst of his court, perceived that this rája of *Kálinga* was unawed by fear, and perfectly composed, furious with rage, he thus addressed the *Nighanṭá* who had maliciously informed (against GU'HASI'WO). 'This instant, committing to flames rising out of burning char-

coal, consume at once this piece of human bone, which this fellow worships, forsaking the gods worthy of adoration.' The delighted *Nighanṭá* then formed in the palace yard itself a deep and broad charcoal furnace, calculated to retain heat, by suppressing the rising flame. These *Titthiyá*, blinded by ignorance, then cast into this charcoal furnace, blazing and flaming all round like the appalling *Rárawo* hell, the TOOTH RELIC. By its (the relic's) miraculous power, an enchanting flower, emerging from the flames, in the form of a lotus, but of the size of a chariot wheel, adorned with erect petals and capillary pistils, rose aloft. Instantly, the TOOTH RELIC of the vanquisher (BUDDHO) alighting on the top of that flower, manifested itself by shedding its light all around, like unto the dazzling white jessamine. The multitude, witnessing this miracle, delighted, and making offerings of gold and other treasures, to the TOOTH RELIC of the vanquisher, each abjured his former creed.

"PA'NDU rája, unwilling to renounce the faith he had long professed, causing the TOOTH RELIC to be placed on an anvil (commanded) that it be crushed with a hammer. It (the RELIC however) sank into (became imbedded in) the anvil, and manifesting only the half of itself, shed its light all around, like unto the rays of the sun while rising behind the mountain of the morn.

"The supreme monarch, on witnessing this miraculous power of the TOOTH RELIC of the vanquisher, became bewildered with astonishment. Thereupon, a certain *Nighanṭá*, impelled solely by envy, made this remark to the rája: 'Déwo! the *Awatárá* of WISHNO in the character of RA'MA' and other forms has already taken place: if this human bone be not a part of his body, whence these miraculous powers? Most assuredly this is a portion of the body of that deity who was incarnated in the human form and who, after death, passed to heaven and it was bequeathed (by him) for the spiritual welfare (of the world). This fact is undeniable!' The rája thus replied to this prating *Nighanṭo*. 'Rendering then, all adoration to the merits of that *Nárâyano* (WISHNO) gifted with supernatural powers and extracting, while I am looking on this (RELIC) which is imbedded in this anvil; and making the countenances of the multitudes who are spectators joyous as gay flowers, derive from it all the advantages ye can desire.' The *Titthiyá* imposters, chaunting forth the praises, in every possible form, of WISHNO, sprinkled it (the RELIC) with their (holy) water. The RELIC however did not move from the position in which it was fixed.

"Thereupon the protector of the land (PA'NDU) reviling the *Nighanṭá*, and seeking to discover a means of extracting the RELIC from the anvil, proclaimed by beat of drums through his capital: 'Whoever can extract this instant, the TOOTH RELIC, which is imbedded here in this anvil, obtaining from the rája a great reward, he will ensure his own happiness.' Therefore a certain *Setṭhi* named SUBADDHO, a benevolent character, a believer in the power of BUDDHO, and a wise man, resident in that city, hearing this great beating of drums, repaired to the court of the rája. This individual, though agitated with fear, bowing down to the supreme monarch, explained in the presence of the officers in the court, in persuasive language, the merits and miracles of the OMNISCIENT (BUDDHO)."

SUBADDHO then proceeds to relate the acts of BUDDHO in his former incarnations. His resignation, in the form of the *Chadanta* elephant, of his tusks to the

wild hunter So'NUTTARO. He committed himself, when incarnated in the form of a hare, to the fire, to supply roasted meat to INDRA, disguised in the character of a famished brâhman. His sacrificing his eyes in the character of the râja SI'WO, as an offering to INDRA, who came disguised as a blind brâhman. His forbearance in the character of *Ksantawâdi*, a devotee, towards KALA'BO the râja of KA'SI, who lopt off his arms and legs ; and other pious deeds of BUDDHO in his former existences.

(Translation resumed.)

" ' By the truth of these declarations may the TOOTH RELIC of the vanquisher instantly rising aloft into the air, effulgent as the halo of the sun, dispel the doubt that exists in the mind of the people.' Instantly, the TOOTH RELIC of the vanquisher, rising aloft into the air, like the silvery planet (the moon) shed its effulgence all around. Then descending from its aërial altar, and alighting on the head of the said *Seṭṭhi* rejoiced him, as the sincere votary bent in prayer (rejoices) who is sprinkled with sacred water. The *Nighanṭá*, seeing this miracle, thus addressed PA'NDU the ruler of men. ' *Dêwo !* this is the supernatural *wijjá* power of this *Seṭṭhi* ; it is not the miraculous power of the TOOTH RELIC.' The monarch, on hearing this remark of theirs, thus spoke to the *Seṭṭhi*, SUBADDHO : ' If there be any act which would convince these, have recourse, accordingly, to that miracle.' Thereupon, SUBADDHO the *Seṭṭhi*, calling to his recollection the miracles performed by the supreme MUNI (BUDDHO) deposited the TOOTH RELIC in a golden vessel, filled with scented and delightfully cool water. It rapidly ran round the golden vase, in the scented water, revolving to the right hand, and like unto the king of *Swans*, rising to the surface and diving to the bottom, and making the spectators' eyes stream with tears of joy.

" He (the king) then had a hole dug in the middle of the street, and casting the TOOTH RELIC therein, and having it thoroughly filled up with earth, trampled it down by means of many tusked elephants. A flower of the marsh (the lotus) in size a chariot wheel, the leaves of the flower glittering like a jewel, and dazzling with its silvery pistils, and with petals as if of gold, arose. On this cluster of pistils, agitated by a gentle breeze, the RELIC of the vanquisher, casting its effulgence all round, alighted ; and continued manifest for a short while. Thereupon the people surrendered their garments and jewels as offerings : a shower of flowers descended : with shouts of exultation, and chaunts of gratitude (the people) made the capital ring.

" These *Titthiyá*, then persuading the RA'JA'DHIRA'JA', that this miracle was an imposture, threw the RELIC into a sewer, into which the filth of the town was collected. It (the sewer) was instantly invested with the five descriptions of (aquatic) flowers, which are the food of the swan tribe, and buzzing with the hum of the honey bees, became like the delightful pond in the *Nandá* heavens. The state elephants roared : horses neighed : men set up shouts of joy : drums and other musical instruments rang, each with its peculiar note : the diffident and modest even, who abstain from the dance and song, exulted and reeled, and intoxicated with joy, waved cloths over their heads : the sky was overcast with the smoke rising from incense as if it were a cloud : and from the number of flags that floated (in the air) the city appeared formed of flags themselves !

" On witnessing this miracle, the magnitude of which is inconceivable, the converted portion of the ministers or nobles, forming the resolution to recognize

the true faith, approaching Pa'ndu, the ruler of men, thus addressed him : 'Rája! if a person having witnessed such a manifestation of the divine power of the supreme Muni as this is, experience not the slightest joy, can he be endowed with wisdom? Rája! rejoicing under circumstances worthily productive of joy, is as inherent in the nature of a good man, as is the voluntary expansion of the whole tribe of the night-blowing flowers when the moon rises. Rája! forsake not the path that leads to heaven, by (following) the doctrines of these ignorant persons. What man, not an idiot, who is on his travels, would seek his way, employing a blind man for his guide! The illustrious sovereigns, Kappino, Bimbisa'ro, Suddho'da'no' and other rája's (the contemporaries of Buddho) believing in the salvation of that rája of *dhaṇmo*, with sincerity of faith, drank of *dhaṇmo*, as if it were the nectar of the gods. The thousand-eyed and long-lived chief of the *dewos* (Indra), having had recourse to the lord of Munis, who had overcome mortality (regeneration by transmigration), and heard his pure *dhaṇmo*, attaining the blessing of *dhaṇmo* (the *sówan* sanctification) secured his protracted existency (of three kotis and sixty lacs of years). Ruler of men! do thou also, in order that thou mayst follow the path that leads to heaven, and eternal emancipation, quickly incline thy heart towards the supreme ruler of *dhaṇmo*, the vanquisher of the five deaths, and the *dewo* of *dewos*!'

"The monarch having listened to this declaration, and his disbelief in the *three treasures* (Buddhism) being overcome, in sincerity of faith, thus addressed himself, in the midst of his court, to the minister who was his spiritual counsellor : 'I who have disbelieved the merits of the *three treasures*, which are the means of salvation from *Saṇsára* (eternal transmigration) have long professed an heretical faith ; and although in the full exercise of my imperial authority, I have been deceiving myself (with vain glory), I have been shivering with cold, while I appeared to be a blazing meteor ; and in the blindness of my ignorance, I have been blowing at a firefly (to produce heat) : while I have been agonized with thirst, forsaking the flowing river, I have been seeking, with procrastination, the deceptive waters of a mirage. I who have longed for a protracted existence, rejecting the aliment of life, have subsisted on the subtlest poison ; and throwing aside a garland of *sapu* flowers, have borne on my shoulders a coil of serpents. Forthwith repairing to the sewer and invoking it (the relic) bring forth the relic of the vanquisher : I will perform the acts of piety, which ensure universal, spiritual happiness.'

"Thereupon this spiritual counsellor of the king, who was the prime minister, in the fulness of his joy, repaired to the sewer ; and bowing down to the relic of the supreme Muni, thus invoked it. 'The ruler of men, renouncing the heretical creed he long professed, places implicit faith in Sugato' (the deity of felicitous advent) ; do thou, therefore, repairing to the palace of this monarch, increase his joy in the *three treasures*.'

"Instantly, it (the sewer) assumed the form of a pond like the lake *Mandákini* (in the Himálayan country) resplendent with full-blown flowers of golden hue. Thereupon, the relic of the chief of Munis, like a swan, sailing from one blown flower to another, glittering like the rays of the white jessamine, made the

whole city appear as if immersed in an ocean of milk. Then transferring itself to the palms of both hands of the prime minister, which were as red as a flower and rendering itself manifest to the great concourse assembled, made him an instrument of conferring signal benefit on the people. The ruler of men, on hearing of this (further) miracle performed by the RELIC, in the impatience of his joy, hastening thither on foot, and manifesting his two-fold delight, in sincerity of faith, with clasped hands, thus prayed (addressing himself to the RELIC) 'Universal intelligence! practised traffickers assign a value to gold after having tried it on a touchstone: this has been a practice from days of yore. Worldly persons, on finding a gem of a rich mine, perfecting it by passing it through fire, for the purpose of exhibiting it, set it in the crown of royalty. Supreme MUNI! in the present instance, it was for the purpose of putting thy (divine) attributes to the test, that all this has been done by me. Infinite wisdom, pardon this act of great presumption on my part; and instantly adorn the crown of my head.' Thereupon the TOOTH RELIC, resplendent in the form of a jewel alighting on his head, shed around a white halo, like unto milk spirting from mothers under the impulse of affection for their offspring. This bearer of the RELIC (PA'NDU) then walking in procession round the capital, making offerings of flowers, incense, &c., conveyed it within his palace, which had been previously decorated for the occasion. The rája then deposited it on the imperial golden throne, over which hung the great white banner (of dominion.)

"This monarch, for the rest of his existence, taking refuge in the *three treasures* of which BUDDHO is the first, (viz. BUDDHO, DHANMO and SANGHO;) and forsaking his former cruelties towards the animal creation, and becoming the fount itself of compassion, was thoroughly imbued with benevolence towards all mankind."

The third chapter then concludes with stating that PA'NDU built a splendid temple for the RELIC, and dedicated his dominions to it, as ASOKO had done before him to the BO-TREE at *Buddhagaya*, an account of which is given in the 18th chapter of the *Maháwanso*, that he conferred great presents and honors on GU'HASI'WO; and discarding the heretics, zealously supported Buddhism.

The fourth chapter opens with an account of an attack made on *Páṭitipura*, by a rájá named KHI'RA'DHA'RO, on account of the RELIC. Buddhists in *Ceylon* have been taught to understand that KHI'RA'DHA'RO was a Buddhist, and sought the acquisition of the RELIC, out of devotional feelings. I can, however, find no authority for this view of his motives, nor for assigning *Sáwattipura** to be his capital, which would in that case make him the sovereign of *Kósalá* (*Oude*). PA'NDU leaves his capital, with a great army, to meet him in the field. KHI'RA'DHA'RO is defeated, and, as will be seen afterwards, is killed in this campaign. The *Dáthádhátuwanso* then proceeds with the following account of the termination of PA'NDU's regal career.

* In Captain FORBES' account also, of the TOOTH RELIC, published in the *Ceylon* Almanac for 1835, *Sáwattipura* is stated to be the capital of KHI'RA'DHA'RO's dominions.

"Thereafter the chief of rulers (Pa'ndu) having secured the prosperity of his realm, resigning the cares of dominion to his illustrious son, and restoring the tooth relic of Sugato to, and conferring great favors on, Gu'hasi'wo, permitted him to return to his own dominions (*Kálinga*). The protector of the world, by the distribution of riches in charity in various ways, having gladdened the distressed, and for a considerable period, led the life of piety which appertains to the sacerdotal state, (i. e. *became a Buddhistical priest,*) after corporeal dissolution (death) was transferred to the mansions in the realms of the *Déwos*, and realized the many rewards of righteousness which were the objects of his aspirations."

To save space I revert to an abstract of the remainder of this chapter. The relic is restored to *Dantapura:* a young prince of *Ujjéni* visits that city on a pilgrimage to the relic: he thence acquires the name of Dantakuma'ro, and Gu'hasi'wo bestows his daughter (He'ma'ma'la) with a rich dowry, on him in marriage, and appoints him the custos of the relic*.

The nephews of Khi'ra'dha'ro, who had led a wandering life, from the time their uncle had fallen in battle, came, with a great force, to attack *Dantapura* for the purpose of getting possession of the relic. They fortified themselves in its vicinity, and called upon Gu'hasi'wo either to surrender the relic, or give them battle. "The ruler, on receiving this demand, instantly made this confidential communication to the prince (Dantakuma'ro). 'As long as there is life in my body, I will not surrender the tooth relic to another. Should I not be able to vanquish them, assuming the disguise of a bráhman, and taking possession of the tooth relic worthily adored by *Déwos* and men, fly to the *Sihala (Ceylon).*' Having received this important injunction from his father-in-law, Dantakuma'ro inquires who would receive and befriend him in *Ceylon.* The king explains that it is a Buddhistical country, blessed with pious priests, and that the reigning sovereign Maha'se'no had sent offerings to the relic, and even solicited for a little of the holy water in which the relic had been bathed."

Gu'hasi'wo then sallies forth with his army, and is killed in battle, by the nephews of Khi'ra'dha'ro. Dantakuma'ro assuming the preconcerted disguise of a bráhman, escapes out of the town with the relic, and "proceeding to the southward crossed a great river, and buried the relic in a sandbank of that river." Returning to the city in his disguise, he brought away his spouse, also in the garb of a female bráhman, and resuming possession of the relic remained in a wilderness. After many miraculous adventures, and in particular, meeting an inspired théro, who gives them advice and spiritual courage, the royal pair reached the port of *Tálamitá* and found there "a vessel bound for *Ceylon*, firmly constructed with planks sewed together with ropes, having a well-rigged, lofty, mast, with a spacious sail, and commanded by a skilful navigator, on the point

* An office kept up to this day, and called in *Singhalese* "*Diyawadana nilame*" which literally signifies "the water-bearing-chief," from the duty he *had* to perform in the temple, till it was assigned to priests, who now perform that ceremony at the daily services that are celebrated there.

of departure. Thereupon the two illustrious bráhmans (in disguise) in their anxiety to reach *Sihala*, expeditiously made off to the vessel (in a canoe) and explained their wishes to the commander. He, influenced by their persuasive entreaty, and conciliating demeanour, readily had them hoisted on board." The RELIC is, all this while, concealed in the hair of the princess. A great storm is encountered the first night. During the voyage the rájas make offerings, one festival lasts ten days.

The fifth chapter describes the landing of the RELIC in *Ceylon* at the port of *Lakputanan*, a place I am not able to identify, where it is concealed in the *kówila* of a *dewáli*. The disguised prince and princess are directed in their journey to *Anuradhapura*, the capital at that period, by an itinerant bráhman, and they proceeded hither in the night. There they learn for the first time, and with dismay, the death of MAHA'SE'NO, the rája whose protection they were taught to expect on their landing. They are assured, however, that the reigning monarch (SIRIME'GHAWANNO) is a rigid and a pious Buddhist; and they divulge their having brought the RELIC to a priest resident at the *Méighagiri* wiharo at *Anuradhapura*, who was reputed to be in the king's confidence. This priest receives the RELIC into his own residence, and hastens to report the event to the "*pious*" rajá, whom he finds, in the midst of his recreations, in the royal garden, surrounded by his "pleasure-women."

Two other sections have been subsequently added to the *Dáthádhátuwanso* bringing the history of the RELIC down to the middle of the last century,—into the particulars of which it would be out of place to enter here. Suffice it to say that this atom of idolatary has ever since that period been considered by the Ceylonese Buddhists to be the palladium of the country, and its possession has been deemed indispensible to perfect the title of sovereignty over the land. Between A. D. 1303 and 1314, in the reign of BHUWANEKABÁHU first, ARIYACHAKKAWATI the commander of an army sent by KULASE'KARA king of *Pandi* to invade *Ceylon*, got possession of the RELIC and transferred it to *Pandi*. To treat for its recovery the next monarch of the island PARAKKA'MO the third, proceeded to *Pandi* in person, and was successful in his mission. According to REBEIRO it was captured by CONSTANTINI DE BRAGANZA during the wars of the Portuguese in 1560, and destroyed upon that occasion. The native authorities, however represented that the RELIC was safely concealed at *Delgamoa* in *Saffragam*, during those wars. It was surrendered to the British, together with the Kandyan kingdom, in 1825; and for the tranquillity of the country it has been found necessary to keep this object of superstition strictly in its own custody.

In Dr. DAVY's history of *Ceylon* will be found a drawing of the RELIC, and an account of its abstraction from the temple, and its subsequent recapture, during the general rebellion in 1818. Should my conjectural reading of these inscriptions prove correct, it would

be a coincidence of no ordinary singularity, that by mere accident, it should have fallen to the lot of the person who has had the official custody of this RELIC since 1828 to have suggested that reading. During that period, the six-fold caskets in which it is enshrined have been twice opened, once in May, 1828, at the request of the natives, when a magnificent festival was celebrated, which lasted a fortnight; and again in 1834, to admit of Sir ROBERT and Lady HORTON seeing it, on which occasion the scientific Austrian traveller BARON VON HUGEL was also present. The keys of the sanctum are never absent from my library, excepting during the actual performance of the daily religious ceremonies, and at night a military guard is posted at the temple.

Our much valued correspondent then proceeds to his reading of the inscription, which with his permission we now withhold, with exception of the opening paragraph, which has formed the text of the foregoing paper. It is as follows:

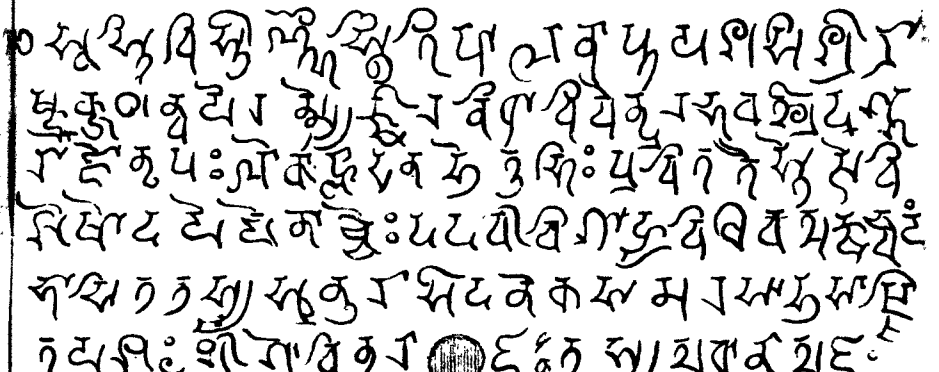
1. *Déwánanpiya Pánḍu so rájá héwan áhá, Satta wisati*
2. *wasa abhisiténa mé iyan dhanmalipi likhapitá*
3. *hi. Dantapurato Dasanan upadayin. Ananta agáya dhammakámatáya.*
4. *Agáya parikháya, agáya sásanáya agena bhayena, &c.*

"The Rajá PA'NDU who is the delight of the déwos, has thus said. This inscription on *Dhanmo* is recorded by me who have attained the twenty-seventh year of my inauguration. From *Dantapura* I have obtained the tooth (relic of BUDDHO), out of innumerable and inestimable motives of devotion to *Dhanmo*, with the reverential awe, &c."

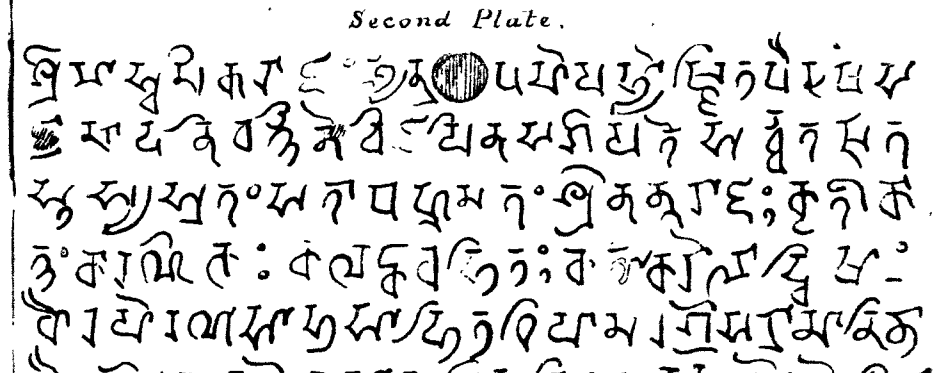
Mr. TURNOUR rests the tenability of his corrections upon the possibility of errors in the printed transcript. There is, however, no chance of these in the name of the rája—neither is there any in the passage *hidatapálaté*, &c.—which is confirmed by *three* texts. With full anticipation that the author will himself abandon his reading when the July No. reaches *Ceylon*, we refrain from entering into defence of the reading, if not of the interpretation, we have ourselves adopted. The word *agáya* we also think is much more intelligible as *aghúya*; and *susúsaya* cannot certainly be read as *sásanáya*. For the most part the author's translation (which extends only to the four tablets) corresponds in substance with the one published, and after having invited him to the labour, it was perhaps ungracious to anticipate it by an attempted version of our own;—but we are very sure Mr. TURNOUR will forgive an ambition so natural, and the learned world will be well pleased that our interpretation should have in all but a few passages the confirmation of so distinguished a scholar.—ED.

COPPER PLATE GRANT from MULTAYE

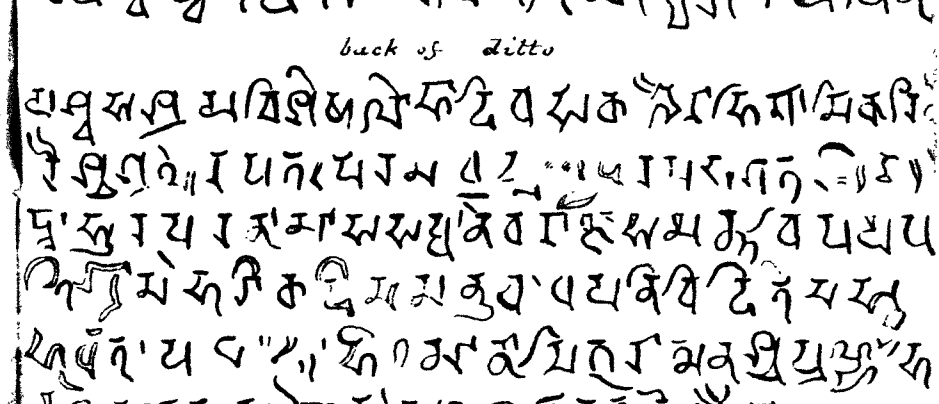
First Plate.



Second Plate.



back of Ditto



Third Plate

Back of Ditto

SEAL



M. Ommanney del.

Brunsdon lith.

Printed at the Oriental Lith. Press, Calcutta

IV.—*Facsimiles of ancient inscriptions, lithographed by* JAMES PRINSEP, *Sec. As. Soc. &c. &c.*

[Continued from page 786.]

Copper-plates from Multáye, or Multäi.

Plate XLIV. exhibits in facsimile an inscription on three copper-plates connected by a ring and seal in the usual manner. It was discovered by MANATON OMMANNEY, Esq. of the Civil Service, under circumstances which will be best described by an extract from his letter, transmitting the originals whence the lithographs have been made:—

" *Baitool, 9th Oct.* 1837.

" My long promised inscription has been delayed in the hope of elucidating its contents: but all my endeavours have been without success.

" The plates belong to KAMALA BHARTRI' a *gosáin*, who is a pensioner of government, and who enjoys a small parcel of rent-free land at *Multáye*, as a religious grant for pujá at the temples built on the tank whence the *Táptí* river is said to take its rise. On my investigating the rent-free tenures two years ago the man brought them as his *sanad* and begged me to use my influence in procuring the restoration of his rent-free village of *Khar Amla* near *Multáye*, which had been resumed at the commencement of our rule in these provinces by Major MCPHERSON. The plates he said were proof of right; for no one could read them, they were so old and authentic. Whatever other proof he may possess it is clear that the present *sanad* altogether disproves his pretensions. Observing in your journal for November last an illustration of the copper-plate inscription sent by Mr. MCLEOD from *Seoní* I recollected this and sent for it.

" By means of a key you furnished, and by comparison with an inscription communicated by Serjeant DEAN in a former number of your publication, I made out a part but could get no good pandit to translate what I had deciphered. I made over the key and plate to DHUNDI RÁJA SHÁSTRI', our *sadar ámín*, who kindly finished the task and gave me a translate in *Bhásha*.

" There are no such names as DATTA RÁJA*, GOVINDA RÁJA, MÁSWAMIKA RÁJA†, or NANDA RÁJA, in the catalogue of *Garha Mandala* rájas. They may be descendants of BAKHT BULAND of *Deogarh Bálaghát*, but it is not probable. It appears that they were *Rahtores*

* I read this name DURGGA RA'JA.—ED.

† The *sadár ámín* reads *Máswamika rája*; but it is probable that the text should be understood as *Srimat-Swámika rája*.—ED.

(*Rashtra kuṭas*), but still they were called *Ghorowa* or *Gond**, which induces me still to think they must have reigned somewhere in these parts. The villages mentioned have not the slightest resemblance in name to any in this district, nor can I discover any at all like them at *Hoshangábád* or *Jubalpúr*.

"You will observe that the grantee in the *sanad* is a *Chaubi*, (*Chaturvedí*,) and the present possessor a *gosaín*, which shews that it must have changed hands though the *gosaín* tells me it has been in his hands for forty generations,—a piece of gross exaggeration! No one could read or decipher it, and it was looked upon with great veneration and respect: indeed I could hardly induce the man to lend it to me."

My friend Mr. Ommanney has been very successful in deciphering these plates, there being but few places in which a careful collation with the aid of my pandit has suggested an amendment of his reading. One of the most obvious corrections is that of the name, on the seal, and in the second line of the 3rd page where the plate is much worn, viz. Yudhásura in lieu of *Yudhástara*, which the *sadar ámin* apparently supposed a corruption of *Yudhishthira*. The first name also read as Datta Rája should be Durgga Rája.

But the most material correction applies to the date, which Mr. Ommanney interprets as *Samvat* 1630, or A. D. 1573. The alphabetical type at once proves that this supposition is many centuries too modern, nor do I clearly see how the pandit could so far have misled his master in the translation, seeing that the text is read by Mr. Ommanney himself and the pandit *s'ateshu shatkena trins'ottareshu*. The obvious meaning of this is six hundred and thirty besides,—just about the period we should have assigned to the writing on comparison with the *Gupta* and *Gujeráti* styles. But it is not at all certain that this is the correct reading, or that the era can be assumed to be that of Vikramáditya. The precise letters in modern character are,

शक काले संवत्सरे शतेषु ? ? ८ त्रिंशोत्तरेषु

saka kálè samvatsarè s'ateshu ? ? trins'ottarèshu.

Now in the first place, the era is here that of *Saka* or *Saliváhana*: in the next, after the word *s'ateshu*, hundreds, in the plural number, two unknown characters follow which may be very probably numerals. The second has much resemblance to the modern ८ or

* The word supposed to be *Ghorowa* is precisely the same as that on the seal, the surname of the rája, Yudha'sura, the 'hero in battle,' so that the connection with the *Gond* tribes cannot be thence deduced.—Ed.

eight, but the first is unknown and of a complex form: its central part reminds us of the equally enigmatical numeral in one of the *Bhilsa* inscriptions. It may perhaps designate in a cipher the word *ankè* अङ्के, 'in numerals' thus purporting 'in the year of *Saka*, hundreds, numerically 8, and thirty over.' A fertile imagination might again convert the cipher into the word अष्टके, eight, afterwards expressed in figures; but I must leave this curious point for future elucidation, wavering between 630 and 830 for the date of the document, which in either case is of considerable antiquity and indeed one of the most ancient of such records yet brought to light containing a date.

I now subjoin Mr. OMMANNEY's transcript and translation with the modifications I have before alluded to.

On the Seal, श्रीयुधासुरः

First page.

स्वस्ति विक्रीर्ण स्थितियाजनाश्रयग्रसि श्रीराष्ट्रकूटान्वये रम्ये क्षीरनिधाविवेन्दुरभवत्श्री दुर्ग्गराजोन्वयः लोकाह्लादन हेतुभिः प्रविततै स्तेजोविःप्रेषेादयैर्येनाक्षेः पदवीं विगाह्य विधिवत्पत्तद्वयं भासितं ॥ तस्यसू नुरासीदनेकसमरसाहसार्ज्जितयशः श्रीगोविंदराजः* तस्यात्मवागात्मजः

Second page.

श्रीमाखमिकराज इत्यनुपमो यस्यार्ज्जितं पौरुषं संग्रामादनिवर्त्ति नेाविजयिनः संगीयते सर्व्वतः जातस्तस्यसुतः सतां बहुमतः श्रीनंदराजः क्षती कांतः कारुमिकः कलङ्करहितः कालः करालोदिधां धीरेयो रणसाह साहितधियामग्रेसरो मानिनां वैदग्ध्योद्धतचेतसामधिपतिः कल्पद्रुमो योर्थिनां

Third page.

यस्य संश्रयविशेष लोभादिव सकलैराभिगामिकैरितरैश्च गुणैर्व पेतः परमब्राह्मण्यः परमभागवतः श्रीयुद्धासुरपरनामा स सर्वानेव राजसामंतविषयपतिग्राम भोगिकादीन समनुबोधयति विदितमस्तु

* The metre requires here an addition of 12 letters to the 9 found in the original to complete the *Sardúla vikririta* verse. These KAMALA'KA'NTA would supply thus: घोरानन्द सुधाकरस्य जगतां 'the moon of the happiness of the wise.'

भवतां चास्माभिः मातापित्रोरात्मनश्च पुण्याभिवृद्धये कौत्सगोत्राय मित्र चतुर्वेद पौत्राय रणप्रभ

Fourth page.

चतुर्वेदपुत्राय श्रीप्रभचतुर्वेदाय किणिहिवजरा पश्चिमेन पिण्परिकाया उत्तरेण जलुकाया पूर्वेण उजानग्राम दक्षिणेन हभिराघाटनैः जल कुहनामग्रामः कार्त्तिकपौर्णमास्यां उदकपूर्वं प्रति पादितः यतोस्मदंश्यैरन्यैर्वा ग्रामिन्द्रपतिभिरस्मदायेानुमन्तव्यः प्रतिपाल यितव्यश्च योज्ञानतिमिरपटलावृतमतिः उच्छिन्द्यादाच्छिद्यमानवेानु मोदेतस पंचभिर्महापातकैस्संयुक्तः स्यादिति

Fifth page.

उक्तंचभगवतावेदव्यासेन व्यासेन बहु भिर्व्वसुधाभुक्ता राजकै स्सगरादिभिः यस्य यस्य यदा भूमिस्तस्य तस्य तदा फलं षष्टिवर्षसहस्राणि स्वर्गे तिष्ठति भूमिदः॥ उच्छेत्ताचानुमंताच तान्येव नरके वसेत् एककालसंवत्सरेष्वतेषु षटकेन (?) चिंशोत्तरेषु खि खित मिदं शासनं सांधिविग्रहिकेनाउल लिखितं॥

Translation of the Multáye Plates.

(On the Seal) Sri' Yudha'sura, (the adopted name of the prince.)

Swasti! Sprung of the pleasing lineage of the *Rashtrakúta (Rahtore)*, like the moon from the ocean of milk, was the Prince Sri' Durga Ra'ja through whose conciliatory conduct to the meritorious, and his vigorous energy, extending his rule to the ocean, secured him the good will of both parties, (his friends and enemies.) His son was Govinda Ra'ja, whose fame was earned in many a battle;—from him was born the self-controlling and fortunate Prince Ma'swamika Ra'ja, the unrivalled, whose valor is every where the theme of song, who never turned his back in battle and was always victorious. His son is Sri' Nanda Ra'ja, much respected by the pious; handsome, accomplished, humane, faultless, a dreadful avenger *(kála)* on his enemies: foremost of the aspirants for military renown, chief of the dignified, and prominent among the active and intelligent, the very tree of desire *(kalpa druma)* to the necessitous.

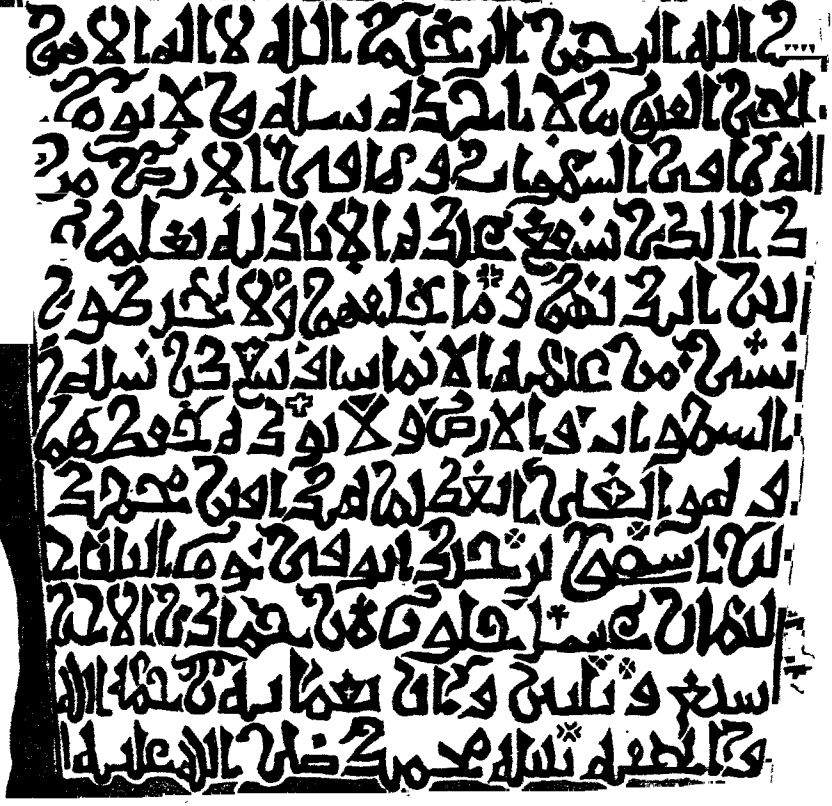
All natural and acquired qualities seek refuge in his virtuous breast, a firm *Bráhmana*—a firm *Bhágavata**—his surname is Srí Yuddhasura†, (the hero of battle.) He hereby proclaims to all his officers, nobles, and

* That is, a rigid disciple of Vishnu.

† Mr. Ommanney reads '*Ghorowa Sur*—(*Ghorowa* the Sanskrit for Gond)' but the word is evidently the same as that on the seal.

ARABIC TOMB-STONE

from the Red Sea - in the As. Soc Museum



cut on a black limestone.

JPrinsep lith.

Printed at the Oriental Lith. Press

the holders of villages, "Be it known to all of you that we, for the promotion of our father and mother's virtues, consecrating with water, present to Srí PRABHA CHATURVEDA* of the *Kautsa* tribe, the grandson of MITRA CHATURVEDA, and son of RANA PRABHA† CHATURVEDA, the village named *Jalau Kuha*‡ bounded on the west by *Kinihi vajurá*, on the north by *Pipparikú*, on the east by *Jalukú*, and by *Ujánagráma*§ on the south,—on the full moon of the month of Kartika.

Let this gift be held unobjectionable and inviolate by our own posterity, and by princes of other lines. Should any whose mind is blinded with ignorance take it away, or be accessary to its resumption by others, he will be guilty of the five great sins.

It is declared by the divine *Vyása* the compiler of the *vedas*, "Many kings have in turn ruled over this earth, yet he who reigneth for the time is then sole enjoyer of the fruits thereof||. 'The bestower of lands will live sixty thousand years in heaven, but he who resumes it or takes pleasure in its resumption is doomed to hell for an equal period.'"

In the *Shakakál*, six (¶) hundred and thirty years over, was written this edict *(Sásanam)*: AULA, the well skilled in peace and war**, wrote it.

Arabic tombstone in the Society's museum.

The stone containing the Arabic epitaph which I have lithographed in Plate XLV. was presented to the museum by Dr. MILL, Principal of Bishop's College, previous to his departure, as noticed in the proceedings of the 1st November (printed in the present number). The account there given of the place whence it was brought "a ruined burial ground on the African coast of the Red Sea" corresponds so closely with the locality of a similar tombstone depicted by Sir GRAVES HAUGHTON in the first volume of the Royal Asiatic Society's transactions, while the stone itself agrees so precisely with the description there given, in appearance and in date, that I cannot help imagining it must be the twin brother of the one carried home. I may quote the very words from Lord VALENTIA's travels also borrowed by Sir G. HAUGHTON:

"On the northern side (of the fort of *Dhalec-el-kibeer*) are the ruins of two small mosques built of stone, with round cupolas at top

* Commonly pronounced *Chaubè*.

† Mr. OMMANNEY reads *Ratka* but the original has evidently *Rana* written with ण instead of न.

‡ Apparently a vernacular name, 'the well of water.'

§ The sadar ámín, Mr. OMMANNEY says, would read उज्जानग्राम, but the second letter is evidently a *ja*, and the class of the succeeding nasal confirms it.

|| That is, I suppose, his power is absolute to grant endowments, &c.

¶ I have kept here *Shatkena*, as read by Mr. O.—See the preceding remarks.

** *Sandhi vigrahi*,—(the minister?)

but of a rude workmanship. In the one toward the sea is an Arabic inscription cut on a stone placed in a recess. Around the mosque a great number of monumental stones are placed upright in the ground at the heads of the persons whom they commemorate; many are well carved, and beautifully adorned with flowers and other ornaments, some in the Cufic, some in the Arabic character. As the stones are in general of a portable size, Mr. Salt was desirous of taking one away, but as he was assured by the priest that this could not be done without express permission from the Nayib of *Massowah*, he contented himself with taking a copy of one inscription which seemed to be held in the highest veneration, though externally it had nothing to recommend it, being indifferently carved and having a corner broken. The priest informed him that it belonged to the Shekh or Sultán who built the tanks. It is immediately opposite to the principal mosque, and by the natives constantly kept moist with oil."—Vol. II. p. 41. January 14, 1805. Dhalac el Kibeer. "At daylight I (Mr. Salt) went with Abdallah and the two Europeans to the northern mosque for the purpose of getting possession of some of the monumental stones mentioned in my former account. The best finished inscriptions were engraved on stones too heavy to carry away. I therefore made choice of *two* of the most perfect carved in different characters that were portable, and wrapping them up very carefully, proceeded back to our lodgings, not quite satisfied, I own, with the propriety of what I was about."

Mr. Salt goes on to describe the contentions and dangers he had to encounter, and the bribes he had to pay before he succeeded in packing off his sacred spoils. "When the trouble and expense, adds Mr. (now Sir G.) Haughton, that have attended the procuring this tombstone are considered, it will be matter of regret with every one that these had not the good fortune to be bestowed on some object of greater interest."

The foregoing extract will serve, *mutato loco*, to detail the process of abstraction of the gravestone our museum boasts, if its removal be an object to boast of at all:—at any rate it affords us an authentic sample of the genuine Cufic character of eight centuries ago, and as such it is abstractedly worthy of a place among our other palæographic monuments. But it is Mr. Haughton's description of the stone itself which may stand totidem verbis as the descriptive roll in our museum catalogue. "The stone which is an unknown misshapen mass and very hard is of that variety of the trap family of rocks to which the term clinkstone seems the most applicable, from the sound

it gives when struck with a hammer. The surface had never been polished and the engraver or stone-cutter took advantage of the natural fracture of the stone, as it was sufficiently smooth for his purpose*. The letters are so slightly raised, that the hand might be passed over the surface without the idea being suggested that characters existed upon it."

In addition to these points of resemblance, the date of our epitaph is but two years antecedent to Mr. SALT's—viz; in the year 1045 A. D., his being 1047: and it might hardly be too much to assume that our MUHAMMAD was the father of the FATIMA whose death that monument recorded!

For the deciphering and translation which follow I am indebted to my brother, Mr. H. T. PRINSEP, one of our Vice-Presidents. It comprehends in fact precisely the selfsame passage from the Koran quoted in the Roy. As. Society's description.

The only doubtful reading is that of the name of MUHAMMAD'S father, where the letters are slightly mixed. *Ashafi wald Haida* is the best that can be made of it, but the *d* of *wald* is more like an *r*.

بسم الله الرحمن الرحيم الله لا اله الا هو
الحي القيوم لا تأخذه سنة ولا نوم
له ما في السموات وما في الارض من
ذا الذي يشفع عنده الا باذنه يعلم ما
بين ايديهم وما خلفهم ولا يحيطون
بشيء من علمه الا بما شاء وسع كرسيه
السموات والارض ولا يؤده حفظهما
وهو العلي العظيم هذا قبر محمد

* There is another advantage in the natural cleavage, viz.: that the surface is black, whereas the interior is of a much lighter color, so that the letters become visible as in the lithograph upon a very slight abration of the intervals.—ED.

بن اشفى ولد حيدا توفى يوم اثنان
ثمان عشر خلون من جمادي الآخر
سنة سبع وثلثين وار بعمائة رحمه الله
والحقه بنبيه محمد صلى الله عليه

Translation of the Arabic Epitaph.

In the name of the most merciful God, 'God! there is no God but he; the living, the self-subsisting; neither slumber nor sleep overtaketh him; to him belongeth whatsoever is in heaven and on earth. Who is he that can intercede with him, but through his good pleasure? He knoweth that which is past and that which is to come unto them, and they shall not comprehend any thing of his knowledge, but so far as he pleaseth. His throne is extended over heaven and earth, and the preservation of both is no burthen unto him. He is the high, the mighty*!' The tomb of Mahomed, the son of Ashafi wad Haida (?) deceased on Monday, the 18th day, being past of the month of *Jumadi ul ákhir* in the year (of the Hijira) four hundred and thirty-seven†. May God have compassion upon him and unite him with his prophet, Muhammad, on whom be the blessing of God.

Inscriptions from Hund, near Attock.

In M. Court's 'Conjectures on the march of Alexander,' published in the July number of last year's Journal‡, occurred the following passage: "On the western bank of the Indus ruins may be observed at *Pever Toppi*, *Hound*, and *Mahamadpur*. Those of *Hound* are all striking, and there may be found blocks of marble containing inscriptions traced in characters quite unknown to its inhabitants."

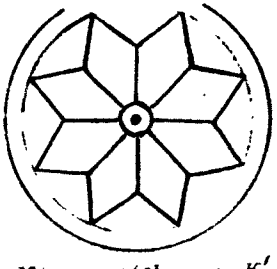
This intimation was not of a nature to be lost sight of, on the occasion of a second visit to the country, by so enterprising a traveller

* Sale's Koran, vol. I. page 48. This passage, which is justly admired as containing a noble description of the Divine Majesty and Providence, is often recited by Muhammadans in their prayers; and some wear it about them engraved on an agate or other precious stone (Reland de gemmis, Arab.) It is called the *áyat ul kursi* from the mention of the throne of God toward the conclusion.

† Equivalent to the 30th December, 1045, Monday. (See useful Tables.)

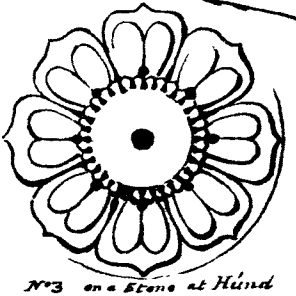
‡ Journal Asiatic Society, Vol. V. page 395.

INSCRIPTION ON A WHITE MARBLE SLAB FROM HUND NEAR ATTOK ON THE INDUS.

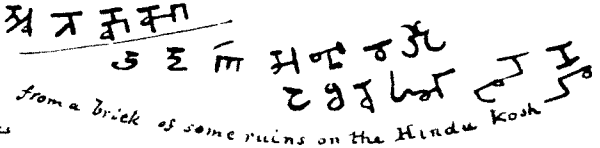


N°4. on a red stone near Hund





N°3 on a stone at Hund

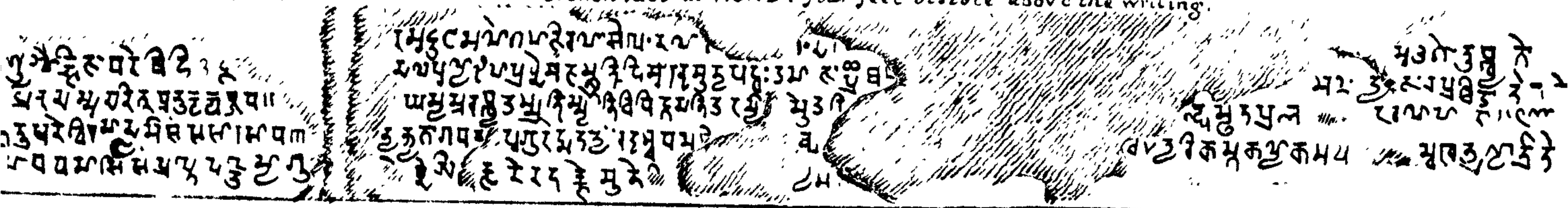


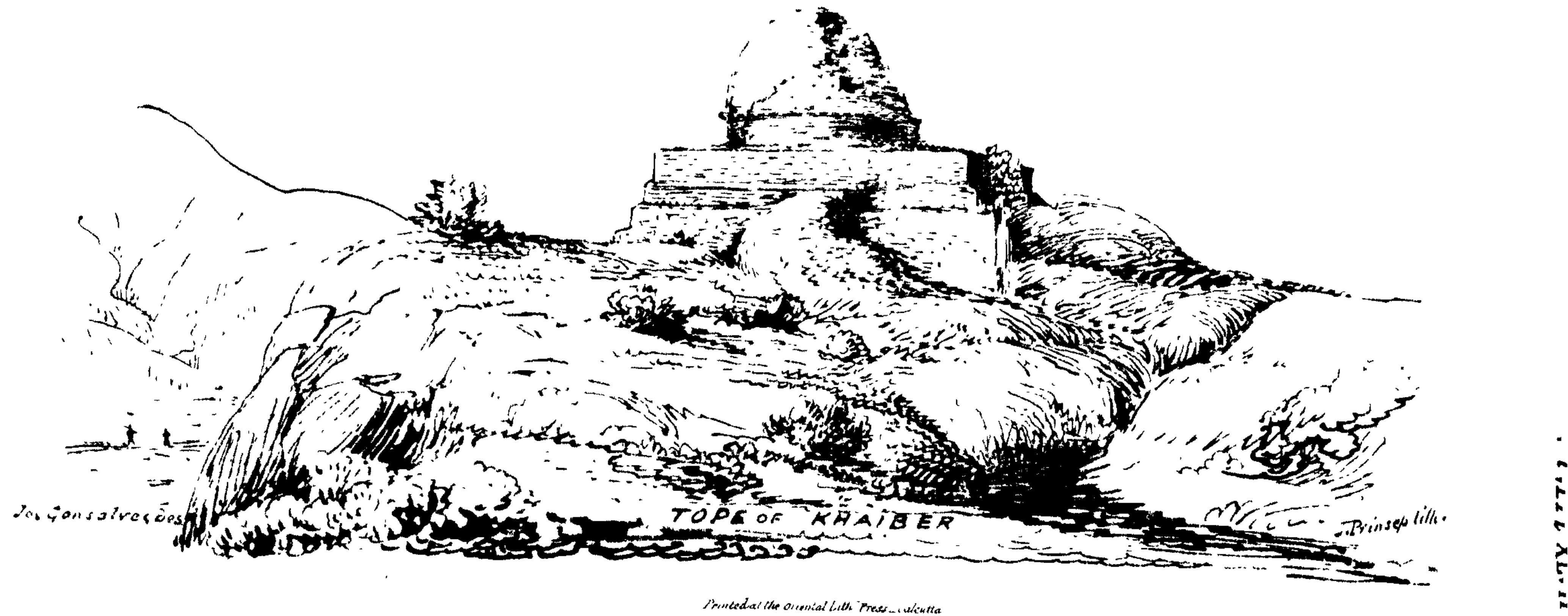
From a brick of some ruins on the Hindu Kosh

A. Burnes del. J. Prinsep lith.

Printed at the Oriental Lithic Press - Calcutta

No 2. INSCRIPTION under a broken idol at HUND: four feet visible above the writing.





Printed at the Oriental Lith. Press, Calcutta

as Captain BURNES. Finding therefore that M. COURT had not since enjoyed an opportunity of following up his discovery, he hastened on reaching *Attock* to fulfil the desire I had expressed to obtain accurate facsimiles of the writings at *Hound* or *Hund*, a ruinous place situated on the north bank of the Indus, about 20 miles above *Attock*.

"I have, however," writes this zealous and active explorer, "not only got facsimiles, but rája GULAB SINGH, when he heard of my curiosity immediately sent me the stones themselves, and I have placed them in deposit at *Pésháwer* in charge of mullá NAJI'B, subject to your commands, that is, if they be found worth sending, they shall be sent to you: they are all on marble, and appear to me to be in the Sanskrit tongue.

"No. 1, (lithographed on a reduced scale in Plate XLVI.) is an inscription said to be fifteen hundred years old, which had found its way into a moslem building, though originally in a Hindu temple. A follower of the faithful made a mortar of it and thence the round hole, in which the barbarian pounded his *massála, (culinary condiment.)*

"No. 2, (see Plate XLVII.) is an inscription at the base of an idol: but the image has disappeared with exception of his two feet, having been destroyed by the idol-breaking *(but-shikan)* Mahomedans. I fear it is too much mutilated to shew more than the nature of the writing.

"Nos. 3 and 4 are ornaments cut upon other stones, the former very neatly in white marble. No. 4 has the addition of a shell, and a monogram,"—(the word *srí* in an old form of *Nágarí*.)

"As to inscriptions I have got intelligence of three others on the road across *Hindu Kush* into *Badakshán*. There is one, Babel-like, on a brick from a ruin lying between *Kuner* and *Bajour*, (see foot of Plate XLVI.) and I have sent a man to copy the whole, as well as for others of which I have tidings, one on the small road between *Dur* and *Arab Khan*, and the other in *Cashgar*. I hope they will all ere long appear in your journal, and I wish any might turn out Greek, but the only Greek article I have yet heard of, is a helmet on an idol in the same neighbourhood which I hope soon to possess."

Inscription No. 1. is, as Captain BURNES supposes, Sanskrit, and had we the stone itself instead of a copy made by hand, I think all that remains on the mutilated fragment might be read :—but, however well executed, it is clear that in the present facsimile the *m* and *s* are frequently confounded, also *ch*, *r*, and *n*, which nearly resemble one another. Again the cross line in the *sh* ष, seems omitted where

we see a ष surmounting a क contrary to the rules of the Sanskrit grammar. The correction hazarded on this score in the third line is of some importance, because it brings in the powerful *Turushcas* (or Turks) as foes overcome by the nameless hero of the record. The only name on the stone is that of Srí Tillaka Bráhman, who was most probably but the composer of the versification, or the engraver! so that nothing valuable to history has been gained but the fact of the extension of Indian rule to this point of the Indus, and its early struggles with the Tartar tribes beyond. As to date I should guess, andt hat may be done with tolerable accuracy now from the gradual transformation of the Devanágarí letters, that it belonged to the seventh or eighth century—somewhat less than local tradition assigns.

I have collected together line for line such words and sentences as could be safely transcribed:—in some (as the fifth line) by supplying an initial word, Kamalákánta; pandit has found a complete half verse. The concluding words सुत्रकी होगि *sutra ki hogi* has the sound of pure Hindí; it is not Sanskrit.

Transcript of Inscription, Plate XLVI.

1 स्वस्ति १॥ भूपतित्वंयतित्वं वा यैरऱातिभिरेजते

2 कीर्त्तिमुपरियां रिंगते हितायतरिभिःस्वयं

3 ताःयेनोद्दिक्षतुरुष्कपुष्कलपल (त्रासा) करेणात्मना

4 उक्तिश्चारुविवर्द्धितागुरुजनेविप्रेक्षसंख्यं (च)ः ति

5 (राजायः संविशेष संग्रह रतिर्यत्नप्रजापालने। ह्यनंसरनदेव
ह्यपतष्कि किंनलोके दुरा (यं)

6 नेपेयंपार्वतीसखः॥ ह्रसयंकक्षठोधंमःमी .... यदवींगतःत....

7 वियनममरेसिन्धुराक .....लःतस्य .. तिपितुर्नगुण

8 यत्यमितिचिरस्थी .... प ....यसः सौजन्य

9 गुण .... जा .....

10 देवस्यमहाविभू ..... स्वराष्ट्रः यमनुचन्द्रोरयन

11 नायेोि ..... मह्या ..... ह्यानतपनंस स्वान्तवास

12 न्तनेय (क) ल्याणचेतसः॥ नंपक .... तिर्तये ... प्र ... य

13 न्यस्तच श्रीतिल्लकः ब्राह्मणः। .. स्य क्रिहे सुत्रकीहोगी

Translation.

1. . . Blessings ;—whose kingly and priestly rule even among his enemies spreads:
2. . . above his glory goes . . . . for pleasure. . . . .
3. . . the powerful flesh-eating *Turushcas* causing alarm to,
4. . . . lavishing bland speech on spiritual superiors and brahmans without number.
5. Such a prince as attracts all things to him ; persevering in the protection of his people.
   . . . . . what in the world is difficult (for him) to accomplish ?
6. . . husband of Párbati ; . . . . went on a road, . . .
7. . . . elephant . . . . . whose mother's (?) and father's virtue
8. . . . endure for ages, ... glory and excellence.
9. virtue. . . . . .
10. of *Deva* the great riches, . . . rule . . . . moon . .
11. . . . . great . . . . sun . . . living among.
12. . . . . the cheerful-minded ; . . . . . .
13. . . then Srí Tillaka bráhman, . . (shall be made beautiful ?)

Of the inscription under the mutilated image I can make nothing more than that it is Sanskrit, and of about the same age. I will therefore conclude with an extract from Captain Burnes' letter, alluding to the sketch of the *Khaiber* tope, made by Mr. Gonsalves, roughly copied in Plate XLVII.

"I have just seen the grand *Khaiber* tope of which so much has been said. It is like all the others I have seen, but the pedestal, or basement, or whatever it should be called is different. This looks more like a sepulchral monument than any other tope. It is near *Lál bég ká garhi* in the very pass, and is a very conspicuous object on the right hand as you pass. It has not been opened, and of course is considered to contain great treasures, which I hope you will ere long have the opportunity of investigating. Besides this tope there are several forts in *Khaiber* of massive structure crowning the summit of the hills, and attributed to the time of the *kafirs*, or of course the era preceding *Islám*."

I thus prematurely introduce a mention of this unopened tope, that I may draw the attention of those who are about to undertake its examination to some points of inquiry particularly solicited by a German savant, Professor Ritter of Berlin, who has just favored me with an essay on the architecture of these topes, and is now printing a more elaborate memoir, lately read to the academy of sciences at Berlin, on the curious proportions, construction, and destination of these singular monuments, which he supposes to develop and designate

remarkable facts regarding Buddhism and its influence on the history of central Asia.

I must extract the passage from professor RITTER's letter: "A few words will shew how desirable it would be to communicate the original measurements, ground plan, dimensions, &c. of the *tope* of *Manikyala* whose interior has been laid open by General VENTURA: or if this should be impossible, it would be extremely interesting to know the inner construction of those singular compact colossal stupas by more accurate investigation and measurement; particularly the manner of constructing the cupolas and the inner little chambers, and the square mass of masonry exactly in the centre of the mound, regularly built of quarried stones*. Now by combining the number of feet you mention in the excavation from the height to the base of the last small chamber, or bason under the immense stone slab, and by the singular equidistant proportions of the places where antiques and coins were found as originally deposited, I am induced to conclude that there must have been originally *nine stages*, or stories, from the base of the monument to the platform of the cupola: these nine stages corresponding with the nine *nirvanas* of Buddhist doctrine, and with the monuments of nine stages anciently erected in *Ceylon*. The stages are only *intrinsically* revealed in the Bactrian topes by the floor of the chambers on which the medals were deposited; the dilapidation of the cupolas by the Musalmáns to plunder the metallic ornaments at the top, having filled up with rubbish falling in from above the whole interior of the lower: (carré parfait à douze pieds tres bien etabli au centre, qu'on a creusé à dix pieds de profondeur, dont la battisse regulière s'est terminée la &c. †). But how did these stages communicate with one another? were there staircases?—No mention is made of any steps from floor to floor.

"The other excavations by Messrs. MASSON, GERARD, HONIGHBERGER, &c. give no nearer insight into the actual architectural construction of these monuments, and seem made directly from top to bottom merely to get at the hidden in the readiest manner. I therefore venture to invite your attention to the contents of my memoir."

I have given the passage at length to prove to our explorers in the north what keen eyes are fixed upon their proceedings, and to shew how necessary it is to leave nothing unnoticed in their operations on the topes; but for myself I have no anticipations of the Professor's

* J. A. S. III. p. 315. This passage was afterwards explained to have been somewhat misunderstood,—see M. COURT's account of the same tope.—ED.

† Ditto page 317.

Specimen-fassimile of an Inscription from Kalinjar, in the As Society's Museum. (last part)

(3 letters)

(5 letters)

(*The conoluding half line effaced.*)

J. Prinsep lithgr.

at Messrs. Pearl Lith. Press - Calcutta.

view being borne out,—of similarity to the *Ceylon* topes. The square central building seems to me to be built regularly for the sake of forming the chambers of deposit, the vaults outside of this rubbish is filled in for economy's sake; and an outer crust of masonry in form of a cupola completes the pile. There is no such outward mark of Buddhism I believe on any of the Bactrian topes as on those of *Sárnáth**, and *Bhilsa*, where niches on the four sides were provided with *chatur buddha* shrines. Whether of Buddhist sovereigns or of others, these tumuli were evidently the depositories of bones and ashes to which the coins and trinkets were merely accessary. Professor WILSON has now before him in London the contents of many more topes than we have had the pleasure of seeing, and ere this I dare say he has satisfied the eager curiosity of my learned correspondent and of his numerous countrymen now interested in the development of this train of research.

Inscription on a stone slab in the museum, Plate XLVIII.

While endeavouring to keep pace with the influx of inscriptions from abroad, I must not forget the task I had set myself, of rendering an account of those deposited in our museum, a task which my readers will doubtless be happy to find is now rapidly drawing to a close.

The subject now to be explained is inscribed on an oblong slab of sandstone, $4\frac{1}{4}$ feet by $2\frac{1}{2}$, which I conjecture to be one of those presented by General STEWART, and inserted in the catalogue of vol. XV. of the Asiatic Researches, as "a stone slab from *Ajaya-garh* in *Bundelkhand* with a Sanskrit inscription, or "a stone bull from *Kalinjar*, with a Sanskrit inscription." Should the bull be unconnected with the inscription I should incline to locate the present inscription at *Kalinjar* because of the exact similarity of its alphabet to that of Lieut. SALE's inscription from the same place, inserted in my August No. page 665, Plate XXXII. and further the name of MALIKA occurs in both, but the inscription itself tells us it was set up in the fort of *Jayanagara* along with an image of *Hari*, and a temple and image of *Keshava* in the same place. *Jayanagara* is nearly identical with *Ajaya-garh* in signification: it may have been substituted to suit the metre. None or only one of the long list of names has a regal title; on the contrary the family is expressly said in the 14th verse to be of the *Káyastha* tribe, and their highest genealogical claim seems to have been that

* A most careful and elaborate elucidation by drawings and measurements of the *Sárnáth* tope, by Captain CUNNINGHAM, is now under publication in the Asiatic Researches: but the plates will take a long time for their proper execution.

they sprang from a village, *Kaushamyapura*, in which *Kusha* and *Sunda*, the mythological sons of the rishi KÁSYAPA, had once resided. At one time, probably when the temples and images were erected, they were ministers of a prince of the Solar line. In this respect therefore the record is valueless. Its merit as poetry the learned KAMALÁKÁNTA VIDYÁLANKÁRA does not rank much higher; yet being in our museum and being a fine specimen of the favorite character of that part of the country in the middle of the 14th century, I cannot refuse a place to the translation made for me by SÁRODÁPRASÁD from the elder pandit's accurate transcript, which I have myself compared letter for letter with the original. The characters are called *chitra-varnán* in the 36th verse, but this may be merely a laudatory epithet.

Jayanagar Inscription.

प्रायः प्रौढेन्दिरायाः प्रचुरतरसुखास्निग्धमक्लीणकायो विश्वद्विभ्रांतदृष्टि
द्रुतचकितरतोत्कीर्णपूर्णानुरागः उद्यच्छीवत्सदीपद्युतिरभसरसोल्लासि
तानङ्कहेतिर्देवः श्रीविश्वमूर्त्तिर्दितितनयरिपुर्विश्वमम्बोविभर्त्तु ॥ १ ॥
पिण्याकपिण्डमिवचक्षुरुचिर्मुरारिर्गोवर्द्धनाचलमसौकृतवान् करायै
प्रेमोत्कवल्लरजनीजनिताद्भुतश्रीः श्रेयांसि वो दिशतु गोगणदृश्यमानः
॥ २ ॥ श्रीखेदनर्म्मललितं विदधन् हरिर्व्वो गोपीकरोरुकुचगुण्ठितशायक
श्रीः कामातुरान्तरकुरङ्गवधूविपक्षान् रुन्धन् कुतूहलतयाधियमातनोतु
॥ ३ ॥ मज्जत्स्थमुज्ज्वलतनूर्भवभारभेदी यो वेददुग्धमुदधाविदमुज्जहार
शंखासुरासुहरणः किलमीनरूपी देवः श्रियःपतिरघं भवतांविहन्तु ॥
४ ॥ सम्वर्त्तविन्यस्ततटे जलानां रेमे निधायः खलु योगयुक्त्या जगद्धृतिः
संस्थितचिद्रुचिश्रीः स वो विभूतिं कमठः करोतु ॥ ५ ॥ क्रोडीकृत्य
विश्वालनिष्ठुरतरान्दंतान् वहन्नुदहोमूर्त्तिर्व्विस्तृतधर्म्मकर्म्मनियतिर्व्वा
सोधियाम्माधवः क्रौग्रात् पिण्डितपङ्कपिंग्रलरुचिर्व्विश्वंभरामुद्धेयं
मे वर्द्धयतां सविश्ववसतिर्नित्याधिनाथोदितः ॥ ६ ॥ शुभं वृद्धकाम्बनि
विष्टरश्रिः सहस्रभानोः श्रियमाददानः सुदानवंप्रोत्पुनितैः करायैः
स वो नृसिंहो दुरितं भिनत्तु ॥ ७ ॥ शुक्राच्चिविच्छेयमिघाद्रिपूणां विरूप
यन्नीतिमिवामिताभः वलिप्रमादादववर्द्धमानः स वामनोमेभ्युदयं ददातु

॥ ८ ॥ द्विजकरेक्षितिमाक्रतग्रासनोदधदनुद्धतकद्रिपुयोधिताम् जय यशोभजनाच्जयतिप्रधीः सपरशुः किल रामइतिश्रुतः ॥ ९ ॥ नाख्याय तिर्यस्य पराक्रमाणां महावने पुण्यजनापहारी प्रमोदजालं तनुतेवहूती क्रतोर्विपद्भूः स धिनोतु रामः ॥ १० ॥ आसीन्महर्षिःसकिलादिवेदीज नोविदां काश्यपइत्युदारः यंजातवेदो विधिभिः सुराणां सदप्नये यज्ञ विधिःससर्ज्ज ॥ ११ ॥ कुशसुनाभइति प्रथितौ सुताविह बभूवतुरस्य म हात्मनः अपितमोहरणे तदनुत्तमं रविशशिद्वयमुद्ततामसं ॥ १२ ॥ कुशस्य कौशाम्बपुरे निवासो बभूव पुण्योन्नतचारुमूर्त्तिः अगद्यशक्तिः सम नुष्यमौख्यं तत्र स्थितिं कोपि पुमान् बभार ॥ १३ ॥ सकोपि कायस्थतया प्रतीतो मनोर्विभिर्मानितसंमुखीकः सद्रोत्रमादीनतमाश्रयज्ञस्तं काश्यपी भूतमलंचकार ॥ १४ ॥ गवांप्रपांगोष्ठतनौ शुभायां सुमंत्रमार्गावरणेषु नित्यं श्रियोनिवासादजयत्प्रवंशो वास्तव्यतामप्रतिरूपकोर्द्धिं ॥ १५ ॥ जज्ञे मनस्वारुतया जनीनां महीक्षितां दक्षनयाङ्कुरैश्च सुविद्यया धीर कुलस्य धीमान् हारूकनामाभवदत्र जन्तुः ॥ १६ ॥ लिपिकरकुलकोटेः कोटरस्यागमानां सुक्रतविटपिमूलस्याश्रयस्यद्युतीनां यभवदमिततेजा जल्हणस्तस्य सूनुः सुरगुरुरिव भूमौ भूपतीनां क्रियार्हः ॥ १७ ॥ ततो गुणानां स निधिर्विधिज्ञो गंगाधरोजायतमानवेंद्रः यस्मिन्नृपे भूरतिशक्र वृत्तिमन्येतिनाकश्रियमाससाद ॥ १८ ॥ कमलापतिपादपंकजेन्द्रद्वयं बिभ्रदनिन्द्यमानसः कमलइति नामकोमल सुक्रतश्रीभित कायसुन्दरः ॥ १९ ॥ ततोजन्यजनीकाशेमालिकोमलविग्रहः ॥ मालाभूतमिदं यत्र गुणवृन्दं विदिद्युते ॥ २० ॥ पद्मसिंहोरत्नसिंहोजगसिंहः सुतोत्तमाः जाताःसमरसिंहश्च चत्वारश्चतुरास्ततः ॥ २१ ॥ तेषांसंख्यावतां श्रेष्ठो र त्नसिंहो महामनाः अजायत जितात्मनः श्रीपूतानमितौजसः ॥ २२ ॥ उत्पूर्व्वोपूर्व्वमूर्त्तिः प्रतिक्रतविनयो भूत्सुमैकःप्रवीणः प्रीतिप्रज्ञारुचीनांगण पतिरपरोविश्वविस्फोतकायः धामज्ञानोद्धतानामतिहतमहिमानामना मोन्नताङ्को रेजे राजीवचक्षुः क्षितिपतिसमितिप्राप्तमानानुभावः ॥ २३ ॥ दिग्जनीकर्णकुहरविश्रांतयशसास्तुतः चन्द्रात्रेयनरेंद्राणां

सचिवत्वमुपागतः ॥ २४ ॥ तयोःसविज्ञानविधिर्मनीषीमनोरमोनान
इतिप्रतीतः श्रीभोजवर्म्माणमुपेत्यनाश्वंखमंत्र मित्रोदयमाततान ॥ २५ ॥
प्रियंवदत्वात् प्रमदाजनानां सभ्यात्मकत्वात् जगतीश्वराणां पुमानयं प्रा
ग्रतया गुणी यो नानाभिधानं सफलीचकार ॥ २६ ॥ यस्मिन् गुणाधार
तयाप्रदिष्टे विक्लृप्यमाणेनय कुम्भमुच्चैः नवाभिषेकामिव राजलक्ष्मीप्रभुश्चि
रंकामयते फलाय ॥ २७ ॥ तथा वज्रप्रखलकंबुजालं पयोनिधिं यस्य यशो
वसारि चमंडयन् मंडनसारशैलाधिकेनरूपेण मनोनुहारि ॥ २८ ॥
विहारिणी यस्य दिगङ्गनाभिः समं समुद्गाश्रुतवृत्तवृत्तिः मरुद्धधूभिः किल
कर्णपूरीकृतामुनिभ्यो मुदमादधाति ॥ २९ ॥ नवेन्दुसंकाशतनुप्रकाशः
सदासयज्ञः कुमुदोद्यमुच्चैः मनोरमत्वान्महनीयदेहः पृथ्वीधरंतंतनयो र
राज ॥ ३० ॥ अवेत्य पोतंभवनोरराशौ समुत्तितीर्षुंधियितं श्रियोमुम् ॥
समुक्तये पुण्यतरानुभावादाराधनीं वृत्तिमलंकरोति ॥ ३१ ॥ समीक्ष्य
संसारसुखं पटीयान् आयातरम्यं विषयानुसारि मुमुक्षुरात्मोदयमिङ्ग
कीर्त्या विभर्त्ति सत्तुङ्गसरोरुहेण ॥ ३२ ॥ अथसुललितबुद्धिर्नानरत्न
प्रभावो जयवति जयदुर्गे कीर्त्तिहेतोः फलानां सुरचित हरिदेहं पैत्रमेतं
गुणज्ञः प्रवितननयजालोकारयत् कृत्यवेदी ॥ ३३ ॥ माननीयमति
नानः प्रतिमीकृतकेशवं प्रासादं स्थापयामास पितृविश्रामहेतवे ॥ ३४ ॥
यावन्नगा वसुमती मरुतां कुलानि रत्नाकराः ग्रहर्क्षदिवाकरदीप्तिवृन्दं ॥
तावत्सपुण्यवसतिर्मनुजो विधातुर्विश्वोधितिष्ठति सुरोत्करमानमीयः ॥
३५ ॥ अमरयतिरनन्योगुर्व्वलंकारसारां पटुपदलपनीया मेघशिष्टःस्य
विष्टः अचयदुरुगुणार्कः संभृताभिज्ञसंज्ञः कृतिकुतुकमभीप्सुर्वाक्पदीं
चित्रवर्णां ॥ ३६ ॥ त्रयोदशेक्षणगतश्रुतिभूतसमन्विते संवत्सरेशुभेलेखि
वैशाखेमासि सद्दिने ॥ ३७ ॥ अंकेपि १३४५ समयेवैशाखः
परस्परप्रीतियुजौ प्रियंवदौ सुतौ सुकर्म्मोत्तरनाथवल्लभौ नयेनयुक्तौभुव
नेयशस्विनौसचंपकायां तनयावजीजनत् ३८ कायस्थवास्तव्यांते प्रतो
लिकान्वित जयपुरदुर्गाधिपठक्कुरसुयैसुत पंसुहदु केनमेतं लिखितं
सकारश्रीमोपाच शुभंभवतुकारकस्य ॥

After transcribing the above and carefully comparing it letter for letter with myself, KAMALA'KA'NT begs to add the following protest against various orthographical errors which I have insisted on maintaining in accordance with the original text.

॥ श्रीकमलाकान्तेन यथादृष्टं तथापठितं पाठितं लेखापितंच एषुश्लोकेषु मध्येक्वचित् क्वचित् व्याकरणछन्दोलंकारदोषा दृश्यन्ते तद्दोषहेतुर्न कमलाकांतः ॥

Translation.

May DEVA (VISHNU), the father of all, support this universe, whose form he is; luxuriating in the embrace of the youthful LAKSHMÍ, unwearied, with frequent start and flash of eye, intoxicated with delight; whose breast-jewel, *srí vatsa* shines like cupid's arrow, shot by the expanded bow of its own ray. (1.)

May MURA'RI (VISHNU) bless you, who supports the mountain *Goverdhana* on the palm of his hand like a lump of *penyáka** (the cattle looking on), whose wondrous beauty has captivated the lovesick milkmaids of *Ballava*. (2.)

May HARI the warm companion of LAKSHMÍ, scarred by the touch of his maidens' breasts, sportively thwarting the enemy of the licentious deer, inspire you with supernatural knowledge. (3.)

May DEVA, the fish-transformed husband of LAKSHMÍ, restorer of the milk of the vedas which lay buried in the ocean—the refulgent, the destroyer of dependence on this world—the slayer of *Sankhásura*,—destroy your sins. (4.)

May the Tortoise, who unmindful of the deluge played on the ocean shore in abstraction, the refuge of the world, constant in refulgent beauty, prosper you. (5.)

May MA'DHAVA, in the form of a boar, who delivered the earth by the thrust of his cruel crooked tushes, and extended the merit of virtue; the abode of intelligence, of earthy colour from the mud he has thrown up, increase our blessing. (6.)

May NRISINHA the man-lion, bright as a thousand suns, who preyed on the body of *Hiranyaka kasipa* father of the virtuous *Prahláda* and supported him with uplifted hands, destroy your sins. (7.)

May that *Vámana* (dwarf) bless me, who changed the rule of his enemies, on pretext of piercing the eye of *Sukrachárya*; who increased in size for the ruin of *Bali*. (8.)

That *Parashú* is become glorious, who has gained the surname of *Ráma* from his victories; who granted to the brahmans his well-governed earth, who warred with the wicked, and is acute in sense. (9.)

May *Ráma* too, whose power is infinite, the giver of all joy, the destroyer of the *Rakhshas*, save you from all danger! (10.)

The venerable sage KASHYAPA, first expounder of the vedas, most learned of men, was created to satisfy the deities with burnt offerings. (11.)

* Mustard seed after the oil is expressed.

This noble spirit had two sons *Kusha* and *Sunábha* resembling the sun and moon, in the dispersion of darkness. (12.)

Kusha lived at *Kaushanyapura*,—beauteous from deeds of virtue, unbounded in strength, goodness, and stature. At the same place resided a certain person, (13.)

Known to have belonged to the *Káyastha* caste, the ornament of the *Kashyapa* line, respected by the learned, and satisfier of the expectations of the needy. (14.)

He erected a drinking trough *(prapa)* for cattle on the roadside near the pastures. He conquered the mountain fastnesses, being himself the abode of *Párbatí*; he was without rival, and of good descent. (15.)

From him descended *Janha*, afterwards called *Háruka*, because he stole the hearts of women by his beauty,—those of kings by his just administration of the revenues, and those of the learned by his wit and deep knowledge. (16.)

Superior to all of the writer caste, the receptacle of the *A'gamas*, the root of the tree of virtue, the vessel of light,—he had a son named Jalhana, of infinite vigour, second only to the tutor of the gods *(Vrihashpati)* a portly man of diplomacy. (17.)

Ganga'dhara was born of him, superior to all mortals; the receptacle of all virtues; conversant with religious law, he surpassed Indra, and when king gave to the earth the beauty of heaven. (18.)

His son Kamala on whose heart is planted the lily foot of Kamala'*s* husband—of no contemptible mind, and of personal beauty correspondent with his virtues.

Malika was born of him, resembling Aja rája, of tender person, crowned with a halo of good qualities. (20.)

From him was born these four the most active and the best of sons, namely, Padma Sinha, Ratna Sinha, Yoga Sinha, and Samara Sinha. (21.)

Of Malika, the enslaver of his passions the chaste as Lakshmí, the unbounded in spirit, was born Ratna Sinha, who was superior to the other three and whose mind was noble. (22.)

His son Nana was glorious, handsome, the most experienced and superior to all in *Sáma*; next to *Ganapati* in mutual love, understanding, and in beauty, and fat, being always at home; he destroyed the pride of the vain boasters who were vain of their strength, he was tall with eyes like the lily: he was respected in the court of rájas and was free from sickness. (24.)

His fame had reached the ears of the women on all sides: he was minister of the *Chandra* and *Atreya* lines. (24.)

He was known by the name of *Nána*, teacher of the religious laws and wisdom to the above dynasties, he was learned and agreeable, requiring not advice of allies when he sent his horse to the rajá Bhoja Varma. (25.)

He did justice to his name *Nána* (i. e. various) by his success among the women through his sweet words, and among kings through his politeness, nay every one loved him as his own life. (26.)

He being fixed as the receptacle of merit, and having attained the *Kumbha* of morals, his father supplicated the new anointed royal LAKSHMÍ (VARMMA of Ujjein ?) (27.)

His spreading fame adorned the ocean (which is fitted with playful shells) with the additional splendour which it received from his kingdom. (28.)

His wife who increased in riches, as the women resembling the *dikshaka* delight the munis; she behaved according to the injunctions of the *Srutus* and was worn by the wives of the gods as an ear-ornament, (i. e. they heard of and had regard to her). (29.)

This son NANA whose person was beautiful like the new moon, who never had any mean object of desire, who was the cause of delight of the whole world, and whose person was become beautiful by being agreeable to all, made the king his father glorious. (30.)

He being desirous of crossing the ocean of worldly concerns by the ship of the husband of LAKSHMÍ, accepted the profession of worship for salvation from the best consideration. (31.)

And seeing the unreal agreeableness of worldly pleasures derived from the surrounding elements, and desiring salvation, he assumed the lily face pure from conversation thus to ascertain self-knowledge; and was wise. (32.)

This highly spirited NANA caused this well made image of HARI to be placed at the victorious and celebrated fort of *Jayanagara* in honor of his forefathers, he was a judge of human merits, an illustrator of all morality, well acquainted with religious duties; and of a mild understanding. (33.)

This man of respectable intellect, established a temple with the image of *Keshava*, at the same place for the final salvation of his ancestors. (34.)

So long as the great mountains, the earth, the gods, the mines of jewels (or oceans), the moon, the sun, and the starry spheres shall endure, so long shall his name exist in this habitation of the creator; who was the seat of virtue and respected by the gods. (35.)

A person named AMARAPATÍ being desirous of gaining the curiosity of learned persons composed this inscription, written with wonderful letters, and filled with excellent metaphors expressed in appropriate phrases. He was obedient to all and corpulent, and was like the sun by his eminent qualities. He possessed the title of a wise man. (36.)

This inscription was written on the lucky day of the month of Vaishákha, in figures Samvat 1345. (37.)

He (AMARAPATÍ) had two sons named SUKARMOTTARANA'THA and BALLABHA, by *Champaká* (his wife) who loved one another, were well known in the world and a pattern of morality.

In the town-division of the *Káyasthas*, having a street on all sides, in the fort of *Jayapura**, by THA'KUR SU'PAU'S son PANSUHADUKA, was this written. Goodluck attend the author!

* This place must not be confounded with the modern town of Jeypoor, which was only founded by JEY SINGH in the middle of the 17th Century. The name is common enough.

V.—*Meteorological Register kept at Darjiling for August*, 1837.

Day.	Barometer. 10 A. M.	Barometer. 4 P. M.	Therm. in Air. 10 A. M.	Therm. in Air. 4 P. M.	Wet. Bulb. Tr. 10 P. M.	Wet. Bulb. Tr. 4 A. M.	Regtg. Ther. Min.	Regtg. Ther. Max.	Danl. Hygr. 10 A. M.	Danl. Hygr. 4 P. M	Rain. Inches	Wind. Morn.	Wind. Even.	Weather, &c. Morning.	Weather, &c. Evening.	Boiling Point. Water.
1	23.166	23.085	61.5	62	61	61.5	58	66	61.5	61.5	0.96	N.	S. S. E.	Rain and thin fog.	Overcast and foggy.	199.4
2	.170	.126	60.5	61.5	60	60	57.5	63	60	61	7.76	N.N.E.	N. E.	Heavy rain.	Fog. and light rain	.4
3	.220	.157	63.5	65	63	64	57.5	66.5	63.5	64	43	Calm.	W.	Fog.	Heavy fog overcast.	.6
4	.216	.153	62.5	61	62	60.5	58	63.5	62	61	1.13	N. E.	S. W.	Fog and light rain.	Heavy rain.	.3
5	.222	.192	62	62.5	61.5	61.5	58	64	61.5	61.5	75	Calm.	S. W.	Ditto,	Overcast.	.2
6	.238	.145	62.5	63.5	61	62.5	58	65.5	61	63	77	S. W.	W.	Ovrt. drizzle.	Ovrt. fog in vallies.	.3
7	.190	.125	63.5	65	63	62.5	58	65	63	62.5	28	W. W.	strong.	Fog and drizzle.	Cloudy.	.2
8	.236	.178	63.5	63.5	62	62.5	57	64	62	62.5	09	W.	W.	Overcast and fog.	Thick fog.	.4
9	.274	.215	63	62	62	62	58.5	64.5	62	62	1.29	Calm.	Calm.	Rain and fog,	Rain and fog	.4
10	.287	.220	64.5	63.5	63.5	65.5	59	69	63.5	65.5	83	ditto.	W.	Ovrt. fog in vallies.	Overcast and foggy.	.4
11	.292	.230	66	66.5	65	65.5	60	68	65	65.5	2.20	W.	W.	Rain and fog.	Ditto distant thunder.	.6
12	.330	.268	63	65	62	63.5	58	68	62	63.5	97	Calm.	Calm.	Clearing near horizon.	Rain and fog.	.8
13	.306	.220	63	66.5	62	65	58.5	69	62	65	38	ditto.	ditto.	Overcast fog in the vallies.	fog.	.5
14	.250	.162	64	64.5	63	63.5	59	67.5	63	63.5	38	ditto.	S. W.	Rain and fog.	fog.	.4
15	.231	.158	64	62.5	63	61	58	65.5	63	61	1.24	ditto.	W.S. W.	Rain and fog.	Genl. ovrt. clearing to W.	.3
16	.280	.220	61	59	60	58.5	56.5	63	60	58.5	14	N.	Calm.	Overcast and foggy.	Fog and drizzle.	.6
17	.287	.203	61	60.5	59.5	60	54.5	62.5	59.5	60	2.17	Calm.	ditto.	Ditto.	Heavy rain,	.7
18	.271	.194	66	64	63	59.5	55	69	63	60.5	..	ditto.	N. E.	Sun. cum. and cirri.	intspsd. Cum intspsd.	.5
19	.288	.210	64	63.5	62.5	60.5	57	66.5	63	60	21	N. E.	S.	Cloudy.	Overcast showery.	.5
20	.296	.225	61	63.5	60.5	62.5	57	66	61	62.5	40	N. E.	W.	Thick fog.	Overcast and foggy.	.4
21	.297	.209	61	61	60	60	56.5	64.5	60	60	10	N.	N.N.E.	Overcast.	Ditto.	.7
22	.262	.155	61	66.5	60	63.5	56	66.5	60	63.5	46	Calm.	Calm.	Drizzle.	Horizon cloudy, thunder S. E.	.6
23	.242	.181	67	65	64	63	56	67	64	63	03	W.	S.S.W.	Cum.	Showery.	.5
24	.285	.200	65	64.5	62	62	59	66	62	62	13	Calm.	Calm.	Overcast.	Rain.	.5
25	.288	.226	68	63	63	60.5	59,5	68	63	60.5	..	S. W.	N. E.	Clear.	Generally ovrt.	.3
26	.290	.220	66	65	64	62	59.5	68	64	62	03	E.	S. E.	Genl. overcast.	Cum. intspsd.	.4
27	.270	.164	66	61	63	56.5	58	67.5	63	56	..	N. N. E.	E.	Few cumuli intspsd.	Generally clear.	.4
28	.270	.203	66	61	62	54	56	67.5	62	59	82	N. E.	S.	Generally clear.	Overcast.	.4
29	.279	.253	59.5	59.5	59	58	55	62	59	58	49	N. N.E.	E.	Heavy rain & fog.	Clearing to S. rest ort.	.5
30	.338	.275	64.5	66	62.5	63.5	55	67.5	62.5	63.5	03	Calm.	Calm.	Overcast.	cloudy.	.8
31	.323	.232	68	67.5	65	63.5	57	70	65	63.5	04	N.N.E.	Calm.	Cumuli intspsd.	Cumuli.	.8
Mn.	23.264	23.194	63.6	63.5	62.1	61.7	57.4	66.1	62.1	61.8	24.51*					

* Rain by Crosley's Pluviometer, 28.22 inches.

VI.—*Abstract of a Meteorological Register kept at the Cathmandu Residency, for July and August,* 1837. *By* A. CAMPBELL, *Esq. Nipal Residency.*

Observations at 10 A. M.					Obs. at 4 P. M.				Wind; weather; rain		
Day.	Bar. at 32°	Thermometer. Air	Wet	Diff.	Bar. at 32°	Thermometer. Air.	Wet	Diff.	At 10 A. M.	At 4 P. M.	Total rain.
July,1	25,199	75	69	6	25,113	80	71	9	W. fair.	W. cloudy.	086
2	185	75	69	6	073	82	72	10	NW. cloudy.	SW. clear.	
3	171	76	70	6	121	80	70	10	W. ditto.	SW. ditto.	230
4	203	76	69	7	159	76	70	6	E. ditto.	E. cloudy.	173
5	207	75	68	7	139	75	70	5	E. ditto.	NE. ditto.	865
6	187	75	69	6	099	80	71	9	NW. ditto.	NW. ditto.	064
7	145	75	69	6	053	82	72	10	NW. ditto.	W. clear.	194
8	099	75	70	5	037	76	69	7	NW. ditto.	S. cloudy.	942
9	076	70	66	4	24,989	77	70	7	S. ditto.	W. ditto.	950
10	092	74	68	6	965	75	70	5	W. ditto.	SW. rain.	645
11	24,973	75	68	7	917	76	69	7	S. ditto.	SW. ditto.	086
12	957	76	70	6	934	77	66	11	SW. ditto.	W. fair.	
13	25,109	76	66	10	25,086	78	66	12	N. clear.	W. ditto.	173
14	234	74	67	7	189	76	67	9	W. ditto.	W. ditto.	
15	314	74	68	6	200	77	70	7	W. ditto.	W. ditto.	
16	223	72	68	4	102	74	68	6	SE. rain.	E. cloudy.	519
17	088	73	69	4	040	77	72	5	E. calm.	NW. ditto.	870
18	219	71	67	4	166	77	69	8	SE. rain.	N. fine.	890
19	235	72	68	4	139	76	70	6	S. fair.	W. ditto.	1.384
20	166	74	69	5	114	74	70	4	S. ditto.	SE. rain.	955
21	163	72	68	4	104	74	70	4	S. ditto.	SW. ditto.	606
22	202	74	70	4	131	74	70	4	SW. ditto.	SW. ditto.	200
23	238	74	69	5	146	77	71	6	SW. ditto.	W. fine.	
24	200	74	70	4	079	79	72	7	W. ditto.	SE. rain.	1.740
25	162	74	69	5	071	79	70	9	W. ditto.	SW. fine.	
26	156	74	69	5	093	80	70	10	SW. ditto.	SW. rain.	1.384
27	186	74	69	5	089	75	70	5	W. cloudy.	SE. ditto.	346
28	162	74	69	5	092	77	71	6	W. ditto.	SW. ditto.	259
29	169	75	70	5	084	77	71	6	SW. ditto.	SW. fine.	
30	192	74	70	4	106	78	70	8	SW. ditto.	SW. ditto.	
31	139	75	69	6	078	74	70	4	W. ditto.	SW. rain.	173
Mean,	25162*	74	69	5	24964†	77	70	7			13288
Aug.1	25,136	70	67	3	25,080	73	68	5	SW. rain.	SW. rain.	
2	164	73	68	5	099	71	68	3	SW. fair.	SW. ditto.	1.730
3	212	73	69	4	124	73	70	3	W. ditto.	SW. fair.	1.384
4	186	74	69	5	112	73	70	3	SW. ditto.	SW. rain.	346
5	212	74	69	5	154	73	69	4	SW. ditto.	SW. ditto.	259
6	210	74	69	5	144	73	68	5	SE. rain	W. fair.	519
7	202	70	68	2	140	73	69	4	SE. ditto.	S. cloudy.	446
8	262	70	67	3	216	70	68	2	SE. ditto.	SE. rain.	346
9	263	72	68	4	202	74	70	4	SW. fair.	SE. ditto.	346
10	289	72	67	5	292	77	71	6	W. ditto.	W. fair.	
11	278	74	69	5	183	80	72	8	W. ditto.	W. ditto.	
12	305	75	70	5	234	77	72	5	W. ditto.	W. ditto.	
13	291	75	70	5	294	73	70	3	W. ditto.	SW. rain.	
14	234	73	70	3	154	73	70	3	S. rain.	SW. ditto.	1.730
15	178	73	70	3	164	73	70	3	W. fair.	SW. ditto.	
16	223	71	68	3	181	71	68	3	S. rain.	SW. ditto.	1.211
17	257	72	67	5	199	71	68	3	S. fair.	SW. fair.	
18	249	71	66	5	164	78	70	8	W. ditto.	SW. ditto.	259
19	244	73	68	5	182	78	70	8	W. ditto.	W. ditto.	692
20	252	70	68	2	169	80	71	9	W. ditto.	W. ditto.	
21	230	73	69	4	156	78	71	7	W. ditto.	W. ditto.	
22	210	74	68	6	121	80	72	8	W. ditto.	S. ditto.	100
29					187	76	69	7		W. ditto.	400
30	323	72	67	5	232	77	70	7	W. ditto.	NW. ditto.	
31	292	73	69	4	195	80	70	10	W. cloudy.	NW. ditto.	200
Mean,	25,237	72,5	68,3	4,2	25,175	75,1	69,7	5,4			9.963

* Mean of Barometer for 29 days, 25,243 † Mean of 27 days, 25,107
Ditto ditto for 2 days, 24,965 Ditto of 4 days, 24,951
Evaporation during July 1,464 inch; fall of rain 13,288 inches.
Evaporation during August, 1 inch; total rain 9,963 inches only.

VII.—*Proceedings of the Asiatic Society.*

Wednesday Evening, the 1st November, 1837.

H. T. Prinsep, Esq., Vice-President, in the chair.

T. H. Maddock, Esq. C. S., Dr. Theodore Cantor, C. Tucker, Esq. and W. Kerr Ewart, Esq. proposed at the last meeting, were ballotted for, and duly elected members of the Society.

Joseph Willis, Esq. was proposed by the Secretary, seconded by Dr. Wallich.

Dr. Colin John Macdonald, proposed by ditto, seconded by Mr. W. Adam.

Major Irvine, Engineers, proposed by ditto, seconded by Mr. H. T. Prinsep.

Capt. H. Drummond, 3rd Cavalry, proposed by Mr. W. Cracroft, seconded by the Secretary.

Nawáb Jabar Khan, proposed by Mr. E. Stirling, seconded by the chairman as an honorary member—referred to the Committee of Papers.

Letters from Dr. McPherson, Major Ouseley, Dr. Spilsbury, and Lieut. E. Conolly, acknowledged their election.

Read, letters from the Secretaries of the Bordeaux Academie Royale, the Geological Society, the Royal Irish Academy, the Antiquarian Society, the Royal Institution, and from Professor Frank, of Munich, acknowledging receipt of the Society's publications.

Read the following letter from the Secretary to the Asiatic Society of Paris in reply to the Society's address of

A Monsieur J. Prinsep, Esq. *Sécrétaire de la Société Asiatique du Bengale.*

Monsieur le Sécrétaire,

Le conseil me charge de vous faire connaitre que la Société Asiatique de Paris a reçu la lettre que Monsieur le tres honorable Président de la Société du Bengale et M. le Sécrétaire ont bien voulu nous adresser en reponse à l'offre que la Société Asiatique de Paris avait fait à la Société du Bengale d'etre un de ses intermediaires pour la vente des ouvrages sanscrits aux quels le gouvernement avait refusé de continuer ses encouragements, et dont la Société du Bengale avait entrepris l'achèvement. Le conseil a été vivement touché des expressions de sympathie et d'estime dont la Société dont vous êtes le digne organe a bien voulu se servir à l'egard de la Société Asiatique de Paris, et il me charge de vous prier de vouloir bien en exprimer à votre illustre compagnie nos remerciements les plus sincères. Le conseil est fier de l'empressement avec lequel la Société du Bengale a bien voulu reçevoir ses offres, et il éprouve le besoin de donner à ce corps célèbre les assurances les plus vives du desir qu'il éprouve de faire, pour le succès des plans arretés par la Société du Bengale tout ce qui est en son pouvoir. Veuillez être assez bon, Monsieur le Sécrétaire, pour renouveller à la Société Asiatique du Bengale l'expression de ces sentiments, et pour reçevoir en même temps l'assurance des sentiments de véritable estime,

avec les quels j'ai l'honneur d'être

Votre trés humble et trés obeissant Serviteur,

Eugene Burnouf.

Paris, le 12 Juin, 1837.

The Secretary read a reply from M. Csoma Körösi to the announcement of the Society's desire to confer upon him the office of librarian.

Mr. Csoma expresses his sense of the high honor done him, and states his intention of immediately proceeding to Calcutta where he will give a definitive answer.

Read extract of a letter from Dr. Royle, Secretary to the Geological Society, transmitting under charge of Captain H. Drummond, the gold

Wollaston medals awarded to Dr. Hugh Falconer and Captain P. T. Cautley, for their fossil discoveries in the *Sewálik* range.

Professor Royle was induced to send these tokens of the approbation of the Geological Society (of which he has recently been nominated an office-bearer), thinking his associates in the Asiatic Society would like to see them; but more particularly because the excellent paper on the Sivatherium was first made public in their Researches, and it would be the best proof of the interest taken by the scientific at home in the novel and interesting discoveries in which so many members of the Society have been successfully engaged within the last four years.

Dr. Royle quoted the following extract from Mr. Lyell's address delivered at the Anniversary Meeting of the Geological Society on the 17th February, 1837.

[The opening of the address presenting the medals was published in our July No.]

ORGANIC REMAINS.

"Gentlemen, you have been already informed that the Council have this year awarded two Wollaston medals, one to Captain Proby Cautley of the Bengal Artillery, and the other to Dr. Hugh Falconer, Superintendent of the Botanic Garden at Saharunpore, for their researches in the geology of India, and more particularly their discovery of many fossil remains of extinct quadrupeds at the southern foot of the Himálaya mountains. At our last Anniversary I took occasion to acknowledge a magnificent present, consisting of duplicates of these fossils, which the Society had received from Captain Cautley, and since that time other donations of great value have been transmitted by him to our museum. These Indian fossil bones belong to extinct species of herbivorous and carnivorous mammalia, and to reptiles of the genera crocodile, gavial, emys, and trionyx, and to several species of fish, with which shells of fresh-water genera are associated, the whole being entombed in a formation of sandstone, conglomerate, marl, and clay, in inclined stratification, composing a range of hills called the Siwâlik, between the rivers Sutledge and Ganges. These hills rise to the height of from 500 to 1,000 feet above the adjacent plains, some of the loftiest peaks being 3,000 feet above the level of the sea.

"When Captain Cautley and Dr. Falconer first discovered these remarkable remains their curiosity was awakened, and they felt convinced of their great scientific value; but they were not versed in fossil osteology, and being stationed on the remote confines of our Indian possessions, they were far distant from any living authorities or books on comparative anatomy to which they could refer. The manner in which they overcame these disadvantages, and the enthusiasm with which they continued for years to prosecute their researches when thus isolated from the scientific world is truly admirable. Dr. Royle has permitted me to read a part of their correspondence with him when they were exploring the Siwâlik mountains, and I can bear witness to their extraordinary energy and perseverance. From time to time they earnestly requested that Cuvier's works on osteology might be sent out to them, and expressed their disappointment when, from various accidents, these volumes failed to arrive. The delay perhaps was fortunate, for being thrown entirely upon their own resources, they soon found a museum of comparative anatomy in the surrounding plains, hills, and jungles, where they slew the wild tigers, buffaloes, antelopes, and other Indian quadrupeds, of which they preserved the skeletons, besides obtaining specimens of all the genera of reptiles which inhabited that region. They were compelled to see and think for themselves while comparing and discriminating the different recent and fossil bones, and reasoning on the laws of comparative osteology, till at length they were fully prepared to appreciate the lessons which they were taught by the works of Cuvier. In the course of their labours they have ascertained the existence of the elephant, mastodon, rhinoceros, hippopotamus, ox, buffalo, elk, antelope, deer, and other herbivorous genera, besides several canine and feline carnivora. On some of these Dr. Falconer and Captain Cautley have each written separate and independent memoirs. Captain Cautley, for example, is the author of an article in the Journal of the Asiatic Society, in which he shows that two of the species of mastodon described by Mr. Clift are, in fact, one, the supposed differ-

ence in character having been drawn from the teeth of the young and adult of the same species. I ought to remind you that this same gentleman was the discoverer, in 1833, of the Indian Herculaneum or buried town near Behat, north of Seharunpore, which he found seventeen feet below the surface of the country when directing the excavation of the Doab Canal*.

"But I ought more particularly to invite your attention to the joint paper by Dr. Falconer and Captain Cautley on the Sivatherium, a new and extraordinary species of mammalia, which they have minutely described and figured, offering at the same time many profound speculations on its probable anatomical relations. The characters of this genus are drawn from a head almost complete, found at first enveloped in a mass of hard stone, which had lain as a boulder in a water-course, but after much labour the covering of stone was successfully removed, and the huge head now stands out with its two horns in relief, the nasal bones being projected in a free arch, and the molars on both sides of the jaw being singularly perfect. This individual must have approached the elephant in size. The genus Sivatherium, say the authors, is the more interesting, as helping to fill up the important blank which has always intervened between the ruminant and pachydermatous quadrupeds, for it combines the teeth and horns of a ruminant, with the lip, face, and probably proboscis of a pachyderm. They also observe, that the extinct mammiferous genera of Cuvier were all confined to the Pachydermata, and no remarkable deviation from existing types had been noticed by him among fossil ruminants, whereas the Sivatherium holds a perfectly isolated position, like the giraffe and the camels, being widely remote from any other type."

Resolved, that due acknowledgments be addressed to the Geological Society for their courtesy in entrusting the Asiatic Society with the honorary medals awarded to two of their associates, and that they be immediately forwarded with appropriate congratulations to Seháranpur.

The Right Honorable Lord Auckland, Patron, addressed to the Society's attention the following communication just received from the Royal Asiatic Society, confident that the Society would omit no means of giving effect to the objects with which they had been forwarded.

"*The Royal Asiatic Society of Great Britain and Ireland*, 14, *Grafton Street, Bond Street*:

My Lord, *London*, 11*th of May*, 1837.

The Committeé of Agriculture and Commerce of this Society, having had before them certain specimens of Lichens used in dyeing, and being informed that several species are now employed in India for that purpose, and that many more would probably be elicited by a close investigation, and an accurate knowledge of the requirements of the trade, which has been much checked by the short supply, and high price of the best sorts used, I am requested by the Committee to transmit to your Lordship the accompanying specimens of Lichens, with bottles of the ammoniacal liquor used in extracting the color, and of the extracted color; and to enclose fifty copies of the first day's proceedings of the Committee, which contain directions for ascertaining the most useful sorts of Lichens, and for using the liquor as a test of their quality. I am also requested to solicit that such measures may be adopted as may appear to your Lordship to be expedient to diffuse amongst those to whom it is likely to be useful such an acquaintancewith the subject as may tend to advance the views of the Committee.

As the Committee are impressed with the conviction that their views of general utility are fully shared by your Lordship, they feel it unnecessary to offer any

* Journal of Asiatic Society, Nos. xxv. and xxix. 1834. Principles of Geology, 4th and subsequent editions. See Index, Behat.

apology for the trouble which may be occasioned in furthering a measure calculated to lead to the improvement of our commerce, and to be of general advantage.

I have the honor to be,
&c. &c.
H. HARKNESS, *Secretary.*

To the Right Honorable Lord AUCKLAND, G. C. B., Governor-General of India."

Mr. VIGNE'S specimens, deposited in the museum, are labelled as follows:

	Value per ton.		Value per ton.
1. Canary orchilla, ...	£250 to 350	10. Canary rock moss, ...	80 to 90
2. Cape de Verde ditto,..	200 to 300	11. Sardinian ditto, ...	70 to 90
3. West Island ditto,....	150 to 230	12. Pustulatus ditto, ...	20 to 40
4. Madeira ditto.	100 to 150	13. Tartareous moss, ...	20 to 40
5. Africa ditto, ...	80 to 130	21. Useless lichen, liable to be mistaken for Nos.....	1 or 9
6. South America do. ..	80 to 120		
7. Sardinian ditto, ...	30 to 45	22. Lichen valueless ditto,..	12
8. Cape of Good Hope do.	20	23. Bad canary moss ditto, ..	10
9. English ditto, ...	no value.		

"*The Good* has a nearly white powder on its surface, towards the centre; the under surface is of a gray color, and is not hairy; if wetted it does not turn of an orange color; its edges are flat and thin.

"*The Bad* has no mealy white powder on its surface; its under side is hairy, and blacker than the good; its edges are usually more or less knobbed, and on being wetted it generally becomes of an orange color.

"No. 24, contains a mixed sample of good and bad, which has been wetted with water.

"The useless mosses greatly outnumber the useful, and vary from each other, in some instances, by such slight shades of difference, that the above specimens of them can serve little more than to call minute attention to the subject. A *test* for the discovery of color is therefore necessary.

"*Test.*—Take liquor ammoniæ, very much diluted with water, but strong enough to retain a powerfully-pungent smell—half-fill a phial bottle with the same, then add of the lichen (being broken up to a convenient size), so much as will lightly fill up the liquor, so that the whole may be readily stirred about. Care must be taken to leave at least one-third of the bottle for air. The bottle must be kept corked, but be frequently opened, and the contents stirred with a small stick. The color will begin to exhibit itself in a few hours, and the more rapidly in proportion to the warmth of the place in which it is kept; but the heat should not exceed 130° Fahrenh. A piece of white silk placed near the surface of the fluid will show the color before it would otherwise be perceptible. This test will only serve to show where color exists, but will not develope it to its fullest extent.

"*Localities.*—The good sorts are generally found in rocky or stony districts, or where dry stone walls abound; in the neighbourhood of the sea,—or if distant from the sea, in places exposed to sea breezes. The more valuable are met with in volcanic islands. My own experience has been principally in the Canaries, where I find the more arid the situation, the better the quality of the lichens. When the land is high and humid, the useless sorts alone are met with. In dry places near the sea, there are only the good sorts: and there is generally a belt between the two, in which both good and bad are found on the same stones, and not unfrequently overrunning each other.

"There is with the samples a small bottle of ammoniacal liquor, of the strength suited for test: and also a small bottle of the color to be produced."

Resolved, that five copies of the "Proceedings" be communicated to the Agricultural Society; and that others be sent to any members of the Society who may be in a position to collect specimens of Indian mosses for trial and transmission home.

The Secretary brought up the following

Report of the Committee of Papers on the Museum reference of the 6th Sept. 1837.

The question submitted to our consideration on the present occasion is, simply, how we may best dispose of the Government grant of 200 rupees per mensem, (which it has been resolved to accept,) towards the maintenance and improvement of the Society's museum? Whether a successor to Dr. Pearson shall be appointed, or any other mode of superintendence adopted?

The following considerations have induced us to recommend that the Curatorship shall not be filled up for the present.

The objects that had accumulated in the museum prior to Dr. Pearson's nomination having been once arranged by him, there will evidently be little to employ a successor, unless additions could be made on an enlarged scale through purchase or otherwise, for which sufficient funds do not exist.

On the other hand, by employing the money now granted us in purchasing and collecting specimens for the due preservation of which our present establishment is sufficient, we shall in a year or two have amassed materials to give full occupation to a professional superintendent, whom we may then appoint on our former scale, should not the Government at home in the mean time place the museum on a more comprehensive footing. We therefore propose that the 200 rupees be carried to the general account, and that in consideration of this accession to our resources, opportunities be sought of adding to our museum by purchase; and of promoting physical or antiquarian research by such other means as may present themselves from time to time. We would in the mean time place the museum under a special Committee of three annual members subject to re-election, as in the Committee of Papers, and three ex-officio members, viz. one vice-president, the secretary and the librarian. We would further suggest—

That this Committee should hold meetings at the rooms not less than once in the week; that their orders should be carried into effect, and their proceedings recorded by the Secretary as in the Committee of Papers; and that all expenditure should require audit from the latter Committee with exception of the ordinary contingent, which may be fixed at 100 rupees per mensem.

That this Committee should give in an annual report of the progress of the museum, at the anniversary meeting in January, and that they should be entrusted with a general discretion for the disposal and exchange of duplicate specimens for the benefit of the museum.

For the Committee of Papers,

Asiatic Society's Rooms,
20th Sept. 1837. } J. Prinsep, *Secretary.*

Proposed by the Chairman, seconded by Mr. Cracroft, and resolved, That the Report be adopted in all its provisions; and that three gentlemen be elected to act with the Secretary and librarian as a Committee for superintending the museum.

Dr. Corbyn spoke at some length in favor of renewing the curator's appointment. He concluded by moving the postponement of the question until a better meeting could be assembled, which was negatived.

It was then moved by the Secretary, seconded by Mr. Hare, and resolved, that Mr. William Cracroft, Dr. G. Evans, and Dr. McClelland, be requested to act as the museum Committee.

Dr. Evans and Mr. Cracroft being present signified their acceptance of the office.

Library.

The following works were presented on the part of the Royal Academy of Bordeaux:

"Mon portefeuille," a collection of drawings (lithographed for private presentation) of Roman Statues and antiquities, by M. P. Lacour, Member of the Academy, Corresponding member of the Institution, &c.

Essai sur les Hiéroglyphes Egyptiens, par P. Lacour, &c.

Procès-verbal des séances publique de l' Academie Royale des Sciences, Belles-lettres et arts de Bordeaux, 1836.

On the part of the authors.

Institutiones linguæ Pracriticæ, by Dr. CHRISTIANUS LASSEN, Professor at Bonn; 2 fasciculi.

Die altpersischen keil-inschriften von Persepolis, entzifferund des alphabets und erklärung des Inhalts, von Dr. CHRISTIAN LASSEN.

Analysis and Review of the Ricardo, or new school of political economy, by Major W. H. SLEEMAN.

Polymetrical tables prepared for the use of the Post Office—*by Captain T. Taylor, Madras Cavalry.*

On the part of the Societies.

Transactions of the Royal Irish Academy, Vol. XVII.

Journal of the Proceedings of do. Nos. 1, 2, 3.

Journal Asiatique Nos. 7, 8 new series, of the Asiatic Society of Paris.

Lardner's Steam Communication viâ the Red Sea, reprinted in Calcutta—*by the Steam Committee.*

Meteorological Register, *from the Surveyor General.*

From the booksellers.

Lardner's Cabinet Cyclopedia—Ireland, vol. II.

Antiquities, Literature.

[Brought forward from the adjourned meeting of the 4th October.]

Major PEW forwarded the promised facsimile of the inscription on the broken *Delhi Lát,* now in Mr. FRASER's grounds.

The secretary stated that though much mutilated there was not a letter in this facsimile of which he could not assign the exact counterpart in the Feroz lát. It had enabled him to correct a few but very few readings in the translated version while it confirmed some that had been deemed doubtful.

Read a letter from Captain A. BURNES, dated *Camp, Duha* on the river of *Cabul,* 5th September, forwarding:

No. 1. The facsimile of the Sanskrit inscription at *Húnd* 20 miles above *Attok* alluded to in M. COURT's memoir on Taxila (Journ. V. 482). The original is lodged at *Peshawar* awaiting the Society's orders as to its disposal.

No. 2. Inscription under a broken idol at *Húnd.*

Nos. 3, 4. Figures on marble and stone fragments at the same place.

No. 5. A view of the Khyber tope, not yet opened,

No. 6. A mineral resinous jet from the *Khattak* country south of *Peshawar.*

[See notice and plates of the inscription.]

MANATON OMMANNEY, Esq. C. S. forwarded copy of a Sanskrit inscription on three plates deposited in a temple at *Multaye* near the source of the *Tapti* river.

[See the present number, page 869.]

Dr. ALEXANDER BURN, transmitted facsimiles of the contents of two copper-plates found in the town of *Kuira* (*Gujerat*) in the same character as those deciphered by Mr. WATHEN in 1835.

They relate also to the *Sitáditya* dynasty, but as Dr. BURN has offered to send the plates themselves it will be better to await their arrival before attempting to read their contents.

Baboo CONOYLAL TAGORE sent for exhibition to the society a copper-plate in excellent preservation lately dug up in the chur land of a Zemindaree belonging to him in pergunnah *Edopore,* zila *Buckergunj.*

This grant, which is now being transcribed gives an additional name to the list of the *Belál Sena* dynasty of *Gaur*.

A letter was read from T. Church, Esq, dated *Singapur*, 15th August, 1837, presenting to the Society specimens of some ancient tin coins discovered up at that place.

These coins hardly appear to be of great antiquity. They have a lion on one side crest-fashion, typical doubtless of the name of the settlement *Sinhapur*, the city of the lion; and on the reverse what may be intended for a cornucopia or a sceptre. They are of tin and in high relief, and rough on the edges. About 800 of them were dug up by a party of convicts in making a road five miles from the town. The earthen vessel containing them had apparently been glazed and was of a very common shape. it was buried about two feet in marshy ground in a spot until recently covered with dense jungle.

Dr. T. Cantor presented some Scandinavian antiquities of copper and brass,—a knife, an arrow head, pincers and a key.

"They are from different Danish provinces, and were extracted by myself from sepulchral urns containing bones and ashes of the dead, which the heathen Scandinavii used to deposit in huge tumuli. Antiquarians date them about 400 of the Christian era. The key is similar to that used by the Chinese."

The Rev. Dr. Mill presented two stone slabs for the museum, which had been last year brought to him from the west of India and the Red Sea by Captain Roche.

"No. 1 is an armorial shield, taken from the principal altar in a ruined Portuguese church on the top of Trombay hill, Salsette island, one of the first Portuguese settlements. The date of the slab was broken off on removal down the hill. The words were to the purport, "Glory to God. 1644."

"The other stone was brought by an officer of the Indian Navy from the Red Sea; it was found in one of the numerous ruined cities on the Egyptian shore; it was supposed to be a grave-stone upwards of 300 years old."—(See drawing and note in the present number.)

Mr. W. H. Wathen forwarded on the part of Lieut. Postans, an account of the Jain temple at *Badrasir*, and the ruins of *Badranagari* in the province of *Cutch*, with drawing of the image and plan of the temple.

Mr. T. Wilkinson brought to the Society's notice a translation of the elements of Euclid into Sanskrit in the time of rája Siwai Jaya Sinh of *Jaipur* in 1699, called the *Rekha ganita*.

[Will be published in next month's Journal.]

Colonel Stacy drew attention to a coin lately procured by him from the Panjab, uniting the type of the Indo-Scythic series with that of the Indo-Musalmani's of *Kaikobád*.

It was with much regret announced to the meeting that Colonel Stacy had been robbed of a great part of his collection of coins including the unique Amyntas, and all his Bactrians, and 60 gold Gupta coins of *Canouj*!

Mr. D. Liston transmitted two servitude bonds granted by cultivators in the *Gorakhpur* district, shewing personal bondage to be there practised openly at the present day.

Read a letter from Lieutenant Kittoe, 6th Regt, forwarding two manuscript journals kept by himself on a march with his regiment to *Cuttack*, and then to the *Boad* and *Gumsur* country.

These Journals contain minute and beautifully executed drawings of all the temples and antiquities met with on his route, with all the information on every subject he was enabled to pick up. His visit to *Bhobaneswar* and to the *Khangiri* hills have formed the subject of separate memoirs.

Physical.

Mr. Secretary MANGLES presented on the part of the Right Honorable the Governor of Bengal, a copy of Dr. RICHARDSON'S journal of his late visit to the *Shan* frontier in *Moulmein*, in two parts.

Mr. JULES DES JARDINS presented 7th Report and Resumé of Meteorological observations made by the Natural History Society of the *Mauritius*.

Dr. W. BLAND gave a note on Mr. HODGSON'S description of the *Nipal* woodpeckers.

Colonel MCLEOD brought to the meeting several more fragments of fossil bone from the fort boring now at 423 feet.

One a small caudal vertebra of a lacerta animal? the rest testudinous. The kankar pebbles and quartz and felspar gravel accompanying them are increasing in size and bear the appearance of having been rolled.

Mr. C. B. GREENLAW presented on the part of Mr. ALFRED BOND, Master Attendant at *Balasore*, a series of tide registers at *Bulrámghuri* in full for the year, 1834.

Read a letter from Dr. T. CANTOR, presenting a catalogue of serpents and fish in the Society's museum.

Resolved that especial thanks be returned to Dr. CANTOR for the valuable service he has rendered to the Society in arranging and classifying these objects.

The Secretary proposed taking advantage of Dr. CANTOR'S departure for England by the *Perfect*, to request his kindness in conveying a case of the duplicates of the Society's collection of snakes for presentation to the museum of the Honorable Company.

He would also recommend that one of the elephants and rhinoceros' skulls should be entrusted to Dr. CANTOR with a view of presentation to any museum whence he may be able to obtain in exchange some osteological specimens for our museum, not procurable in India.

Dr. CANTOR had kindly undertaken to convey a series of our fluviatile shells to Professor VON DEM BUSCH of *Bremen* and other parcels for the continent.

These recommendations were adopted.

The Secretary obtained sanction for purchase of 31 objects of natural history prepared by M. MONTEIRO and varnished—at 31 rupees.

Mr. SHAW, 3rd officer of the *Ernaad* presented a tetradon, a remosa, and some insects from the Persian Gulf.

Dr. MCCOSH presented the skeleton of a Tapir which he had commissioned from *Malacca*.

The skeleton had unfortunately been ruined by an unskilful hand—the whole animal having been chopped up butcher-wise to be packed in a cask—in spirits—but the head and some bones were uninjured.

Read the following letter from Lieut. THOMAS HUTTON, 37th N. I. dated Simla, 27th August and 4th September.

Simla, 27th August, 1837.

SIR,

At a time when the attention of the Scientific bodies of Europe, is turned to the valuable discoveries of our fossilists in the Sub-Himálayan ranges, it may not be thought impertinent in me, to suggest that the discovery made some years

since by the late Dr. GERARD in the *Spiti* valley, and other places in the interior of these mountains might advantageously be followed up, by farther and more complete research.

Little, save the existence of these fossil beds has hitherto been noted, and the rigorous climate in which they are found, renders it more than probable that few if any subsequent travellers will be inclined to venture into those inhospitable regions, where the Thermometer, in the month of October, stood, in the morning, (as noted in the Dr.'s memoranda), at 16°, 15°, and even 10°.

Through the liberality of Captain P. GERARD residing at *Simla*, I have had an opportunity of perusing the Dr.'s memoranda, and am of opinion that research in the localities he notes down, would give to science some valuable additional information on the subject of these interesting deposits of the antediluvian world.

Subsequent to Dr. GERARD's discovery,—and wholly dependent on that gentleman for his information,—M. JACQUEMONT I believe visited the valley of the *Spiti*,—but whether he succeeded in penetrating to the fossil locality, or was deterred by the rigours of the climate, is unknown.

Shall we, however, allow the riches of our dominions to be brought to light and reaped by Foreign Societies?

They send out travellers to glean in the cause of science, through every clime, while we alone, the richest nation of them all, sit idly by and watch their progress.

I had contemplated an expedition to *Spiti*, this year, but straitened circumstances and family affairs, have obliged me with reluctance to relinquish the undertaking.

Should the Society deem the Dr.'s discovery worthy of being followed up, I would humbly offer under their patronage to undertake the trip, the expences of which, if necessary, I would gladly share.

In those climates the best and I may say only season for successful research would be during the summer months, i. e. from May until the end of September or October, and I should calculate the monthly cost at about one hundred and fifty rupees (150 Rs.)

Dr. GERARD notes the bed of marine fossils, or solid shell rock to be no less than one mile in depth, while loose fossils of various species were lying about on the summits of the ridges at an altitude of 16,000 ft. above the sea.

He had, at the time of this discovery, no leisure to prosecute research, as the season was too far advanced, and his health too much impaired to admit of his exposing himself longer to the bitter cold which was fast setting in,—nor did the Dr.'s pursuits or knowledge of the subject permit his making the most of the discovery.

Other branches of the Natural History of these Hills, might at the same time be pursued with advantage, and according to the Dr.'s memoranda, there are many objects of value and interest in this department to be met with.

Should the Society be inclined to lend a favorable ear to my suggestion, nothing would be requisite but the permission of the Governor General for my being appointed to the undertaking, and from the anxiety His Lordship has ever shown, to forward Scientific Research, little doubt need be entertained as to the result, if solicited to that effect by the Asiatic Society.

I have broached the subject thus early in order that every preparation may be made for the successful accomplishment of the undertaking.

I have the honor to be, &c. &c.

THOMAS HUTTON, Lt. 37th Regt. N. I.

To JAMES PRINSEP, Esq. Sec. As. Soc.

Resolved, that the Society feels much indebted to Lieut. HUTTON for his disinterested proposal, and will have great pleasure in furthering his plan for the thorough exploration of the *Spiti* valley, and the neighbouring regions of the *Himálaya*, by placing one thousand rupees at his disposal for this object, provided he is enabled to prosecute the journey; and on the conditions suggested by himself, that the objects of natural history recent and fossil collected in the trip shall be deposited in the Society's Museum.

Monsieur FONTANIER, French Consul at *Bussora*, forwarded under charge of Capt. EALES, Ship *John Adam*, various objects of natural history from the Persian Gulf.

1. Mineral specimens from the island of *Ormus*. Shell concrete, or grès coquillier, ferruginous and selenitous sandstone and madreporite.

2. Zoophytes and snakes of several species from *Bussora*; also a curious *stellion* or gako *(hemidactulus tuktukia)* with a note description of them.

Mr. D. McLEOD presented a series of rock specimens from the *Sutpora* range commencing with *Seoni Chapara*—the specimens are numbered with reference to a map of the district accompanying.

Dr. McCLELLAND submitted a descriptive catalogue of the zoological specimens collected by himself in the late tour in Assam, together with copies of his ornithological drawings, of which the originals, about 130 in number, have been transmitted through Government to the Hon'ble Court of Directors.

The fossils presented by Mr. W. DAWE of the Delhi Canal Establishment had arrived and were much admired. The following is the list of them furnished by Mr. DAWE.

No. of Specimen.	*Names of Specimens as supposed to be*
1	A tortoise, (a very perfect specimen of trionyx.)
2	A fragment of humerus of Mastodon.
3	A ditto of tusk of ditto.
4	to 8 Fragments of jaws of the Mastodon.
9, 10	Vertebra of the Sivatherium.
11	ditto Mastodon.
12	Right lower jaw of the elephant } the lower maimed.
13	Left lower jaw of the elephant }
14	Fragment of the femur of the elephant.
15	Ditto horn of a deer.
16	Ditto horn of a buffalo.
17	Ditto horn of a bullock.
18	Ditto rib of the Mastodon.
19	Ditto upper jaw of the crocodile.
20	Ditto jaw of a small deer.
21, 22, 23	Ditto of bones not recognized.
24	Ditto lower half head of the hippopotamus, (very perfect.
25	Ditto upper half head of the rhinoceros.
26	Ditto lower jaw of the hog.
27	Ditto ditto of the Sivatherium.
28	Ditto ditto of the bear*.
29	Ditto tusk of the hippopotamus.
30	Ditto ditto of the ditto.
31	A tooth of the crocodile.
32	A lower jaw of a shark (supposed to be.)
33	A fragment of the jaw of a horse.
34	A small box containing right half of lower jaw of the hippopotamus dissimilis (vide Journal, No. 53 and note page 293.)
35	A packet containing an assortment of shells.
36	A sample supposed to be a species of coal, with a portion of bitumen.
37, 38	Fragments of upper part of the head of ruminant.
39	Specimen of fossil wood.
40	Fragment lower jaw of small elephant.
41	Lower extremity of radius and ulna, carpul bones attached, of Mastodon.

* This jaw seems to belong to a new animal at least, it has not yet been identified.—ED.

Meteorological Register, kept at the Assay Office Calcutta, for the Month of October, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.			Observations at 4 P. M.							Calculated Humidity.			Register Thermometer extremes.		Rain.		Wind.		Weather.	
	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Cold on roof.	Heat in sun's rays on roof.	On the ground.	At elevation 45 feet.	10 A. M.	4 P. M.	Forenoon.	Afternoon.
1	29,836	29,7[illegible]	85,6	7,2	6,6	75,0	86	70	70	72	29,694	29,	89,7	10,7	9,2	73,0	79	60	57	60	75,6				N. E.	N. o.	cumuli fair.	cumuli. fine.
2	,795	,7[illegible]	86,9	6,5	6,4	75,8	87	73	72	70	,609		92,6	13,2	11,3	70,5	76	52	52	47	78,2				E.	S. E.	do.	do.
3	,736	,69[illegible]	88,5	7,8	7,9	75,0	85	69	68	65	,612		92,3	11,9	10,3	74,6	78	56	56	50	72,0				N. E.	N. E.	cir.cum.fine.	fine.
4	,682	,6[illegible]	91,5	8,1	7,1	76,0	86	69	70	68	,580		97,3	6,8	6,0	76,7	88	72	74	71	73,5		1,58	1,43	N. E.	E.	mfnb. cm.	thretng., rn.
5	,637	,6[illegible]	92,9	3,2	2,8	76,7	95	85	89	82	,572		91,6	3,5	2,2	77,0	96	84	91	88	74,0		2,41	2,30	E.	N. E.	rn. overcast.	settled rain.
6	,660	,6[illegible]	92,1	2,0	2,5	76,8	95	90	89	89	,601		1,6	6,2	4,5	78,2	91	72	80	90	74,2		0,04	0,02	E.	S.	hard rain.	scud,clearing.
7	,730	,7[illegible]	86,0	5,4	4,5	78,2	91	77	80	74	,612		8,0	6,5	5,6	78,8	89	74	76	74	74,9		0,07	0,07	S. E.	S.	fair.	fine, hazy.
8	,672	,6[illegible]	88,3	6,8	3,5	77,7	94	70	87	84	,580		8,7	10,1	8,8	76,0	82	61	63	68	75,0				S. W.	S.	s. cm. strat.	fine, clear.
9	,625	,5[illegible]	85,9	5,4	4,8	77,7	91	77	80	77	,502		9,5	10,6	10,2	74,0	84	60	66	62	75,2				S.	S. W.	cum. fine.	fair.
10	,686	,6[illegible]	85,0	6,8	5,4	75,2	89	71	76	73	,586		9,5	10,9	7,7	76,7	83	58	65	68	75,4				N. W.	N. W.	fine.	do
11	,734	,69	84,9	4,7	4,0	76,6	92	80	82	77	,627		0,4	11,1	8,8	75,3	81	57	61	63	76,5				W. o.	N. W.	cir. cumuli.	fine.
12	,825	,7[illegible]	86,2	6,0	5,3	76,0	90	75	78	73	,734		9,8	11,0	11,1	72,0	81	88	91	67	73,0				NWo.	N. W.	cumuli.	clear.
13	,882	,8[illegible]	90,7	9,3	8,2	73,0	83	62	65	65	,806		9,8	11,3	11,5	71,5	80	57	59	66	69,0				W.	W.	clear.	do
14	,918	,87	86,7	8,7	8,0	71,5	83	65	65	62	,802		0,2	11,6	7,0	74,0	79	57	57	68	77,3				N. W.	N. o.	do	do
15	,898	,8[illegible]	86,8	8,7	8,0	74,0	83	65	65	68	,802		0,7	14,1	13,2	69,0	74	48	49	51	77,2				W.	N. W.	do	do
16	,887	,8[illegible]	86,0	7,9	6,9	74,7	86	67	70	69	,782		9,9	15,3	12,1	67,8	72	44	46	49	76,8				N. W.	N. W.	do	do
17	,911	,8[illegible]	84,7	13,1	11,7	68,8	73	47	48	60	,819		0,1	17,4	15,3	65,0	68	37	41	46	70,0				N. E.	N. W.	fine.	do
18	,982	,9[illegible]	84,9	12,2	10,7	72,8	76	50	52	69	,864		7,6	15,5	12,3	69,6	71	40	45	66	68,3				N.	N.	clr. plt. wr.	do
19	30,020	,9[illegible]	2,3	11,6	10,3	64,0	77	51	54	56	,920		7,7	14,5	12,8	67,0	72	45	46	52	67,5				N. W.	N. W.	do	do
20	,013	,9[illegible]	81,5	10,9	9,6	71,7	80	55	59	67	,891		9,1	11,7	9,5	71,0	80	55	59	56	73,0				N. E.	N. E.	do	do
21	29,953	,9[illegible]	1,6	5,4	4,3	73,5	93	77	84	70	,867		7,5	4,7	4,0	74,0	93	77	84	90	75,2		0,43	0,41	N. E.	S.	do	rain cldy.
22	,910	,8[illegible]	1,1	5,6	4,5	74,0	91	75	80	81	,836		1,8	6,3	5,4	72,4	90	72	78	74	72,0		1,28	1,17	W. o.	o. S.	cloudy, haze	cloudy.
23	,887	,8[illegible]	1,0	4,9	5,2	74,2	93	77	84	81	,846		0,0	3,6	2,2	75,2	97	82	90	96	71,0		0,54	0,51	E.	s. W.	rn. hard shows.	rn. cloudy.
24	,925	,8[illegible]	79,6	4,5	3,3	73,5	94	80	87	83	,840		2,5	6,9	5,1	73,6	89	70	76	76	70,0				N. W.	N. W.	cloudy.	overcast.
25	,964	,9[illegible]	80,7	6,0	5,0	71,0	90	72	78	74	,856		4,6	10,0	7,9	72,3	83	60	65	68	71,0				N. W.	N. W.	cm. fine.	cumuli fine.
26	,960	,9[illegible]	1,3	7,2	6,0	71,4	87	67	72	72	,850		4,8	10,0	7,8	71,4	83	60	65	66	71,0				N. W.	N. W.	do	cirro cumuli
27	,956	,9[illegible]	1,0	7,5	6,3	69,6	87	67	72	69	,825		5,1	10,8	8,0	69,0	81	56	61	60	69,8				N. W.	N. W.	clear.	clear.
28	,934	,8[illegible]	1,8	9,0	7,1	68,0	83	60	65	68	,835		3,7	12,3	10,6	65,9	77	50	54	55	70,0				N. E.	N.	do	do
29	,068	,9[illegible]	1,0	11,3	10,5	64,5	78	51	56	68	,865		3,4	12,8	12,0	63,5	74	47	49	53	69,8				N.	N.	do	do
30	,970	,9[illegible]	1,7	9,9	8,6	65,2	83	57	63	60	,879		5,1	12,3	9,3	68,8	77	50	54	63	69,5				N.	N.	do	do
31	,942	,8[illegible]	80,2	9,6	8,2	66,5	82	57	63	64	,812		3,2	11,4		66,2	80	53	53	58	69,5				N.	S. W.	cloudy.	cloudy.
Mean.	29,854	29,811	83,9	7,5	6,5	72,9	86	67	71	71	29,753	29,695	86,5	10,5	8,6	71,8	81	60	62	65	72,7		6,35	5,91				

There was a storm in the bay on the 3rd, 6th which dismasted a few vessels. The rains this year unusually light, especially in the N. W. Provinces.

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I.—*Journal of a Trip to the Burenda Pass in* 1836. *By Lieut.* THOMAS HUTTON, *37th Regiment, Native Infantry.*

On the 22nd of September, 1836, I started from *Simla*, which averages an elevation of 7,200 feet above sea level, in company with a small party of friends, on a trip to the *Burenda Pass*, with the intention of crossing into *Kanáwar*. The road from *Simla* to the top of *Mahássú*, is a pretty steep ascent for nearly the whole way, but the scenery, particularly in the forest, is very beautiful and reminds one much of the grounds around a gentleman's country seat at home.

Several species of pines and thorny-leafed oaks, intermixed with large plane trees and various others, compose the forest. Black currant bushes and raspberries, both yellow and red, are plentiful, as also the blackberry or bramble. The fruit of the former is much sought after by the residents at *Simla*, to make preserves with: wild strawberries are also abundant and richly flavoured.

Flowers*[1] of various kinds are scattered over the more open parts of the forest, and flitting over them may be seen numerous butterflies, many of which are common to Britain and continental *Europe*. Among others I recognised and captured the beautiful 'swallow-tail'd'[2] and 'tortoise-shell' butterflies[2];—the caterpillar of the latter, being the same as that of Europe, and like it feeding on the nettle.

The 'painted lady'[2] is also abundant, as well as the large[2] and small 'cabbage butterflies[2].' 'The black-veined white'[2] is among the most numerous, and many of the beautiful little species belonging to the Genus *Polyommatus*.

* See notes at the end.

Here also beneath the decaying trunk of fallen trees I discovered in abundance some new species of land snails[4] belonging to the genera, *nanina*, and *bulimus*.

Pheasants are plentiful down the *khads*, but it is hard work hunting for them.

The *plass* or *pucras* pheasant[5] and another bird called, the *khalij*[5] pheasant, are the commonest, but the *monál*[5] is to be met with towards the latter end of autumn and during the winter season, as also the woodcock[5]; indeed one of the latter birds, I saw flushed in the month of August, and a brace were seen at *Simla* this year in November.

Wild hogs are abundant in the deep glens, where they shelter themselves all day, and at night sally forth to regale on the grain fields, much to the annoyance of the farmers;—they also visit the higher and more open parts of the forest where they turn up the ground in search of aromatic roots, &c.

Bears*, too, are numerous in the rocky glens, arriving from the colder parts of the hills in the autumn and staying during the winter, —retiring again to the interior about April, as the weather becomes hotter.

Besides these, many other animals are inhabitants of this forest, such as the leopard[6], leopard cat[6], the hill fox[6], and troops of lungoors[6], as also the musk deer[6] and flying squirrel[6].

The former animal is seldom seen except at night when it prowls about the sheep-folds, and is often as much the terror and pest of the poor highland villagers, as the more formidable tiger is to the inhabitants of the plains.

At *Simla* where the leopard is by no means scarce, it is necessary at nightfall to shut up the dogs, or they would, invariably sooner or later, as indeed numbers do, fall victims to the voracity of this prowling savage. Even in open day, dogs are frequently snatched up by this animal, when hunting along the wooded banks, only a few yards from their masters. Instances are even on record of their entering houses at night when the doors have been incautiously left open.

Large tracts of the forest of the *Mahássú* have of late years been cleared for the purpose of planting potatoes, which thrive well on sloping grounds and are cultivated to a great extent, vast quantities being annually sent to the plains for sale.

The magnificent timber which once abounded here is fast falling beneath the woodman's axe, and it is to be feared that ere long, the

* Ursus Thibetanus.

so much vaunted beauty of this forest, will have passed away. The demand for good timber, for the purposes of building, since *Simla* became a resort for invalids, has been so great, that the needy and money-loving Ránas, have turned the gigantic beauties of the forest, to account, and many places are beginning to look quite bare and naked from the constant drain upon them.

It is more than probable, if this destruction continues, that in a few years the forest will be ruined; for it is a curious and melancholy fact, that but very few young trees are springing up to supply the places of the parent stock.

Many fine trees are also destroyed by the practice of setting fire to the jangal grass, for the turpentine which exudes so plentifully from the pine trees, immediately takes fire and the bark of the tree is destroyed at the base. The consequence is that rain finds a lodgment and rots the outer wood, which having become soft is immediately discovered and attacked by insects, and the tree in a short time withers and falls. Hundreds of these trees as also many fine oaks are to be seen in every stage of disease, both standing and fallen, and almost all arising in the first instance from the fire having injured or destroyed the bark around the base.

In this stage, stage-beetles[3], capricorn beetles[3] and also the click beetles[3] whose larvæ are nourished in decaying trees, are all busy in completing what the fire has commenced, and even a species of snail[4] contributes much to the ultimate ruin of the sturdy oak by boring into every hole and crevice and reducing the fibre of the wood to the consistency of moist sawdust.

It is upon such trees that the woodpeckers, in search of insects within, bore innumerable holes, and although they are labouring with the laudable intent of destroying the hidden foe, yet they also in no small degree hasten the decay of the wood, by boring so many fresh inlets for the rain and snow.

It must be remembered however, that these much abused birds never attack a sound and healthy tree, and their share in the destruction of a decaying one, may be forgiven, on the certainty of its being destroyed even without their aid, by the insects already within it.

The highest peak of *Mahássú* is 9140 feet above the level of the sea; but the *Devi* temple, past which the road runs, is only 9078 feet, after which the road gradually descends for about two miles through the forest to *Fágú*, where there is a small bungalow of one

room, belonging to government, and which is the usual halting-place for travellers, being about twelve miles from *Simta*.

The elevation of the bungalow is 8040 feet.

From this place a road branches off through the *Jubal* country towards the *Chor* mountain, which is one of the lions usually visited by travellers, and attains an elevation of 12,149 feet. The road across the hills to *Masúrí* also lies in the same direction.

At *Fágú* we halted one day and on the 24th September pursued our march towards *Mattiána*, which is the second stage from *Simla* to the cantonment of *Kotgarh*, and where there is another small bungalow of one room. Elevation 8070 feet.

The grassy hills between *Fágú* and *Mattiána* produce during the rains, immense quantities of a species of *orchis*, called by the natives "*salep misrí*," the roots of which are sometimes collected and dried, and afterwards brought to *Simla* or sent to the plains for sale. If care and culture were bestowed upon these plants and the drying of the roots properly attended to, why might not the hill plant equal the famous Persian and Turkish *salep misrí*, which is now sold at such high prices as almost to preclude the possibility of using it? The hill plant grows at *Simla* and is pretty generally diffused over the interior, and as it may be had in almost any quantities, an important and nourishing addition to the diet of infants and invalids might be furnished at a reasonable and even cheap rate.

The road from *Fágú* is seen for miles running along the side of a bare hill, which on one side shuts out the view, while on the other are deep glens with here and there a few houses. It is a long and dreary march of about 14 miles, and as the party I was with were keen sportsmen, we agreed to breakfast at a wood about half-way, and three miles beyond the old fort of *Theog*, which stands on an eminence near the road and is 8013 feet above the sea.

After breakfast we beat the forest for game and found a musk deer and some plass pheasants, as also the hill partridge and the shikárí of the party brought in some *chicórs*[5].

The whole of this day we walked on leisurely down the *khads* for the two-fold purpose of finding game and avoiding the dreary road to *Mattiána*. In the evening we came to our encamping ground in the bed of the glen below *Mattiána* bungalow, on the banks of a stream, which wound along among the bluff rocks and thickly wooded hills, giving a beautiful and romantic appearance to the scene which is here highly picturesque, the banks of the glen rising some hundreds of feet high on either side, and clothed to the top with trees and brushwood.

Here we found that beautiful little flower, *parochetus communis*, figured in ROYLE's Illustrations. It was growing in profusion among the damp rocks and caves on the banks of the stream. I have since found that it is common also at *Simla*.

In the morning just before daybreak on the 25th we heard the hill blackbirds singing very sweetly from the woods above us. The song is not unlike that of the European blackbird. These beautiful birds commence singing about the middle of autumn and continue their songs throughout the winter and spring, after which they betake themselves to the interior, being autumnal and winter visitants rather than constant residents of the lower hills, although a few may be occasionally met with throughout the year. In the winter season they are found as low down as the vale of *Pinjore*.

At daybreak on the 26th September we ascended a very steep hill towards *Nágkunda*, breakfasting about half-way, by the side of a hill stream and then continuing our journey. On this road are plenty of chicores and a few were shot by the party.

At *Nágkunda* we found two gentlemen from *Simla* who had come thus far to see the beauties of the interior before leaving India for home. In consequence of this rencontre we halted a day and beat the wood for game. Some plass and *khalij* pheasants were killed, and a male musk deer was brought in by one of the shikárí.

The bungalow at this place is larger than those of *Fágú* and *Mattiána*, possessing one large and two small rooms, which afford very comfortable accommodation to travellers. The elevation is 9016 feet.

The scenery from this place is very beautiful.

The cantonment of *Kotgarh* is seen in a slope in the distance, and is much lower than *Nágkunda*, and surrounded by mountains of every shade, from the deepest forest green, to the bare and barren rock, while the long line of eternal snows towers far above them all in the back ground. In the *khads* below the bungalow we found several nut trees with fruit on them, and very similar to filberts in appearance, but all were rotten, and judging from the number of nuts strewed upon the ground, all of which were likewise rotten and were the fruit of the preceding year, I should be inclined to think that few ever ripened. Dr. GERARD mentions having found them rotten in 1818.

The nut tree here grows to a good size, and unlike the hazel bushes of Europe, is really a large tree, springing up some height before the branches spread out, and the trunks of many exceeding a man's body in girth. The tallest trees must have been from 30 to 40 feet high at least.

Flowers of different kinds are here abundant, every open space or grassy hill being studded with various colors; the *anemone discolor, parnassia nubicola,* and *potentilla pteropoda* of ROYLE are innumerable, while in the deep glens or *khads,* growing in damp vegetable moulds, a beautiful white species of *cypripedium* is found, as also a very large white lily, which grows to a height of 6 or 7 feet.

Here also we found a fruit resembling a wild quince, but growing on large trees, with leaves very similar to those of the nut trees.

Another fruit was brought us, which in taste was something like the sloe, the stone somewhat resembling that of the little wild cherry of Britain. The tree is tall and at first sight resembles the cherry tree, but the fruit grows on the stalks in a different manner, being placed at unequal distances up a long straight stem. The hill people call the tree *jummoo, (jamú.)*

These forests are also well stocked with splendid yew trees and pines of enormous growth. The birch is said by travellers to grow here also, but we were not fortunate enough to see any.

On the afternoon of this day a shower of rain fell and the wind was very cold; the snow evidently falling fast over the snowy range which was very white. The sky black and threatening.

On the 27th after breakfast we started from *Nágkunda* and crossed the top of *Hattú* or *Whartú,* a steep hill in the neighbourhood about 10,656 feet high. From the top of this mountain a splendid view opens upon the traveller, and some of the houses at *Simla* are seen, while the snowy range, in its vast extent is laid open. Here I took some fine specimens of snails* of the genera *nanina* and *bulimus,* among the loose stones and ruins of the old *Gurkha* forts which crest this mountain. The shells of the former genus, far exceed in size, those of the warmer hills of *Mahássú.* Here, also, on the very top of the ruins, I found a solitary plant of *mulgedium manorhizum* in flower, its roots firmly wedged in between the massive stones.

There are a few stone huts on the top of this hill erected by an officer, as a temporary shooting box. After resting awhile and enjoying the fine view, we went down the opposite side of the mountain and a few miles farther on brought us to our encamping ground at a place called *Bagie* beneath a hill crowned with the ruins of an old fort of that name, and a short distance above a village called *Shail.*

From this village excellent coolies are procurable and we got all necessary supplies very easily, the villagers coming into camp with grain, ghee and milk.

Part of the road after leaving *Hattú,* lay through a wood and was frequently interrupted by fallen timber. In the open parts among

beautiful flowers of different kinds and colors, gave a very pleasing effect to the scene. At one part of the road, an otherwise bare rock, was bedecked with numerous plants of *mulgedium manorhizum* of ROYLE, while in the first I gathered the golden flowers of "*corvisartia indica.*"

Here again European forms of butterflies presented themselves, sporting among the flowers of the forest. The 'large tortoise-shell'[2] and 'brimstone butterflies,'[2] were recognized, as also the 'marbled white'[2] and two others which appear to be but varieties of the European insects *argynnis aglaia* and *vanessa atalanta.*

Many others peculiar to these hills were also noticed.

Not finding ground to ride over during the latter part of this march some of the party sent back their ponies.

The distance travelled this day was about 12 miles, of which the first five or six were very steep. The elevation of *Bagie* is 9084 feet; the village from which our supplies came is 7400 feet.

Early on the morning of the 28th September we resumed our march and found the whole way beautifully varied with flowers, chiefly of a species resembling a blue China aster. The road or rather track, lay sometimes through deep and shady woods, every now and then opening out upon grassy hills, at other times leading up over rugged rocks resembling steps, with scarcely room sufficient for our feet; the scenery was indeed beautiful and grand by turns, one while presenting verdant meadows, thickly begemmed with flowers, and bounded by dark woods of various shades, at another time changing to dark and frowning rocks, towering high in wild confusion, like the ruins of some ancient and mighty castle of the fabled giants. In shady places hoar frost was lying thick upon the grass. The path became at length so rugged and unfit for riding over, that we sent back the rest of our ponies and determined to perform the remainder of our trip on foot, which soon proved a case of necessity.

We breakfasted about half-way, on the side of a grassy hill, near a large flock of sheep which were folded beneath a huge overhanging rock, and guarded by several fierce and powerful hill dogs.

Large flocks of sheep are pastured on these open patches, and as the pasture is consumed they are driven on to others, always tended by their sagacious and watchful guardians the dogs, to whom indeed the care of the flock is almost entirely trusted, the men lying idly by or knitting shoes and socks of worsted. When in want of a sheep or lamb we found great difficulty in inducing these people to part with one out of a flock of several hundreds; if we succeeded in

attaining one, it was always lame, sick or past breeding and only fit for our dogs.

The reason is, because the sheep are a great and indeed their only source of profit, and are kept for the sake of the wool which is manufactured into blankets and coarse looees *(lúís)* and sold or bartered for other necessaries.

After breakfast we again pursued our journey over similar ground, and at length halted on the side of another open grassy hill called by the guides *Túttú*, the village of *Thar* being far below us in the *khad*. Supplies of grain, ghee and milk were easily procured.

On the side of this hill and along the latter part of the march since breakfast, plants of the wild iris were abundant and apparently of two kinds: I say apparently, because I could only judge so, from the seeds, which differed not only in size and color, but grew somewhat differently, the largest seeds being close to the ground on a short stalk, and the smaller kind raised on a stalk of six or seven inches long. The plants had long ceased to flower, as the seeds were ripe and falling.

Some of these plants and seeds I collected and on my return to *Simla*, the former were planted and have this year (1837) put forth beautiful dark flowers of about half the size of the garden iris, and having the outer or hanging petals spotted with deep lilac, instead of being somewhat striated as in the cultivated plants at *Simla:* the whole flower is much darker. Whether known or not I leave botanists to decide.

This place was the first good monaul ground we came to, and the sportsmen of our party shot several fine birds in the afternoon. It is a beautiful sight to see a cock monaul rise from the cover; he takes wing rapidly down the *khad*, uttering a loud and musical whistle which he quickly repeats during his descent, until he again alights. They are very fond of perching themselves on the top of some bare rock or stone and thence surveying the ground around them. In the morning and evening while feeding, it is difficult to get near them, as they are wary birds, but the best time to get them is during the heat of the day when they are lazily reposing among the brushwood covers and are unwilling to rise, thus allowing you to come near enough to make pretty certain of bringing them down. Being strong birds, they sometimes manage to carry away a good deal of shot.

A sportsman can generally tell whether birds are in the neighbourhood, by observing the holes which they make in the ground in search of roots and insects. It is a curious thing, that when the monaul is

kept in confinement the bill, from wanting the friction caused by digging in the ground, becomes very long and hooked.

One of the party here shot a solitary snipe in a small patch of boggy ground near the camp. It is identical with that described by Mr. Hodgson as the *galinago solitaria* of *Nepál*.

After breakfast on the 29th we started over very hilly ground and narrow broken paths, guided by the shikáris of the party, and made a short march to a nameless place in the forest, on the side of a hill. No village being near us, we were obliged to bring on supplies from the last halting ground. Wild iris again abundant.

To-day some monauls and a young musk deer were shot. It has often been said that the musk deer is not eatable on account of the strong flavour of musk imparted to the flesh. We had the young deer dressed and all pronounced it to be excellent, and in my opinion, far surpassing any venison I have tasted in India.

The young deer has no musk bag and therefore cannot be offensive, and the same must apply to the female, who is also destitute of the musk. An old male may very possibly be bad eating, but so I suspect would be an old he-goat!!

On the 30th we marched up very steep and rocky ground, breakfasting at the edge of a wood and afterwards pushing on again over narrow paths, sometimes affording barely sufficient room for our feet. One of our party unfortunately fell and cut his knee, in consequence of which he came on very slowly, and complained much of pain.

This day we encamped at a village called *Shurmallee*.

Chicores and college pheasants were abundant here. Supplies of grain, ghee and milk procurable. We saw here among the trees, large flocks of the beautiful scarlet flycatcher and its yellow female, *(muscipeta flammea,)* as also the nutcracker crow.

Both of these birds are common at certain seasons at *Simla*, *Mahás-sú* and other places in the interior. I saw also at this place a fine hill fox.

There is a quarry of very good clay slate at this place, with which the houses in the village are roofed. Supplies of grain are by no means scarce among the villages on this route, and so far from being inconvenienced by the demands of our servants and coolies, as we had been led to expect, they have sufficient to trade upon and send grain of different kinds to *Rampúr* and other places. The country is well cultivated and judging from the appearance of the crops, and the healthy and well clad natives in the villages, the produce must be plentiful.

Having halted a day for our wounded companion we again resumed our journey on the 2nd October up a very precipitous and rocky ascent of several miles, and had rather a fatiguing march, the latter part of the way lying through dense forests with occasional enormous masses of rocks intercepting our path; caves and traces of bears were numerous. We at length encamped in the middle of the forest with beautiful bold rocky scenery around us. Here, close to us in an opening of the forest was another large flock of sheep.

Whilst engaged in collecting mosses and lichens, which were here very beautiful and growing in abundance on the trees, I was startled at hearing a bear roar at no great distance from me. On returning to camp however, to give notice to the sportsmen of the circumstance, I learned that a shikári had come suddenly upon the animal which caused him to roar, while he scuttled away in one direction and the shikári another as fast as their legs could carry them, both wondering no doubt, why his enemy did not seize him! We failed in finding him again.

The night was very cold and the water froze in the jugs. This day our supplies came from a village called *Thargong*, in the perguna of *Suppael*, at some distance down the *khads* below us, and the zemindar who was a fine ruddy-faced fellow, was very fond of snuff, which he carried wrapped up in a piece of paper, and stuck in the rim of his bonnet. Having a box in my pocket, which was labelled, and had once contained, "antibilious pills," I presented it to him, with which he appeared highly delighted, twisting and turning it about much after the manner of a monkey, and laughing and talking with his companions on his good fortune. He instantly put his snuff into it, took a pinch with an air of some consequence and threw the paper from him; this was secured by one of his followers, as being very strongly impregnated with tobacco, it answered the double purpose of snuff and snuff-box!

The dress of the people hitherto consisted of the common cloth hill-cap rolled up all round, and the body clothed with blanket fitted close over the breast, plaited round the waist and falling to the knee, like a highlander's kilt; on their feet they wear a sort of half shoe, half sandal, sometimes made of string plaited like chain work, with soles of the same or of leather; others are made of coarse hill cloth or blanket and soled with leather.

In cold weather, too, they wear blanket trowsers, wrinkled and close fitting from the ankle to the knee, round which it becomes full and loose so as not to offer an impediment in climbing a hill.

In the tout ensemble of a well dressed hill-man of the interior, there is a rough and independent bearing which added to the distant resemblance in dress, not unpleasingly reminds one of the sturdy mountaineer of old Scotia. In make they are robust and well limbed, with legs that would be far from disgracing even the much loved tartan of the Gael.

The ottah or flour is carried in the skins of goats roughly formed into bags, with the hair left on.

Our march on the 3rd October was long, owing to the scarcity of water, and the path lay one while over dark and frowning rocks with the traces of bears on every side; and at another, through deep forest tracts.

The changes of temperature were here very great, for over the bare rocky pathway the sun glowed with such vigour, that we were compelled to toil up the steep ascents with our coats thrown off, while on entering the forest tracts, the air struck so damp and chill that we were glad to put them on again. At length we halted beneath a lofty hill, called *Callag* or *Carrag*, far removed from any village. On the hill above us we found a bed of juniper bushes, the birch tree and mountain ash, while at the lower ground where we were encamped, currant bushes both black and red were in abundance, and all bearing quantities of fruit, but possessing little flavour.

Here again we found the monaul and also the Cornish chough[5] or red-legged crow (*phyrrocorax graculus*). Bears were very numerous and their traces quite fresh, and covering the ground in the vicinity of the currant bushes, which were broken down and destroyed in many places, in the attempt to obtain the fruit.

After breakfast the next morning we proceeded down a steep and wooded glen, the path often interrupted by a hill stream, over which sometimes we had difficulty in passing; fallen timber also impeded our progress not a little. This glen was thickly wooded the whole way and at last debouched upon a very pretty spot enclosed between high hills. Here we encamped at a small village called *Demrara*, in the perguna of *Bansúrr*. Supplies procurable.

Walnuts, peaches and crab apples were here growing wild in the jangals. The chough was very numerous at this place, roosting among the rugged cliffs above our encampment.

In the lower and moister parts of the glen during this day's march we found many plants of the beautiful *mulgedium sagittatum*, a figure of which occurs in Royle's illustrations; the plants were in flower and also bearing seed.

At this place I purchased as a curiosity, a small hookah. It is made of the horn of a wild goat[6] and is one of the simplest and roughest pieces of workmanship I have seen. The bowl is formed of the horn, the largest end of which is stopped with wax and resin, while in the smaller end a reed is inserted to draw the smoke through. On the upper edge of the horn near the broad end, another small reed is fixed which supports an unbaked clay chillum to receive the tobacco.

On the morning of the 5th we walked up a steep ascent to a large village called *Rowul* or *Role* where we rested awhile under the shade of a magnificent horse-chestnut tree.

The temple at this place was ornamented with the horns of the *Jehr* and also of goats. It seems a common practice in these hills, when a person wishes for the birth of an heir or the successful accomplishment of any undertaking, to sacrifice a goat or a sheep to the deity.

The sacrifice is performed by beheading the animal with a sacrificing axe of a particular shape, generally called a *dangrah*,—by Europeans termed a *Jubal* axe, from the circumstance of the best being manufactured in the *Jubal* country, near the *Chor* mountain. The animal when killed is taken home and eaten and the horns hung up at the door of the temple as a propitiatory offering to the *Devi*. There is a temple in almost every village and all have these offerings hanging about them. There is generally also a temple of this kind erected on the summits of the highest hills. On the tops of very high mountains and far from any habitation are often seen piles of stones, such as in the highlands of Scotland would be called "cairns;" these piles are dedicated to *Devi* who seems to be the favourite deity of the hill people*. Every person who has occasion to pass these cairns, or whose piety may lead him to them, places a stone upon the heap as an act of homage to the deity, and when these have become too high to be easily reached others are commenced. On these piles very fine specimens of horns of different animals are placed, and sometimes real curiosities may be purloined from them, but of course by stealth, for the natives would not fail to resent the affront offered to their gods, if they discovered it. We saw these piles, but found no horns. The elevation of *Rowul* is 9400 feet above the level of the sea.

Having rested here awhile, we again ascended a very steep and rocky pass of great height, and after a long and fatiguing march in a hot

* With good reason, *Párbati* being the daughter of the sacred mountain, (see MILL'S *Uma*, J. A. S. vol. II.)—ED.

sun, halted at a village called *Yachlí* or *Einchlí*, in the perguna of *Rájghar*.

From this place we had a splendid view of the *Rowal* ghât or pass, covered with snow and distant as a crow flies, about 12 miles. It lay to the left of our route. This pass attains an elevation of 15,555 feet. Some fine horse-chestnut trees and elms overhang this village. The latter trees were sadly disfigured, being little better than tall trunks with knots of young shoots springing out here and there; this is occasioned by the practice of cutting the tender branches and young shoots for sheep and cattle during the winter and other seasons when pasture is scarce.

A few chicores and college pheasants were all the game we could find.

On the 6th we descended into a *khad*, at the bottom of which ran a deep and rapid mountain torrent called the *Undraití* river, which runs down and joins the *Pabbar* at *Shèrgaon*. This foaming torrent we were obliged to cross on what seemed to us inexperienced travellers a very rude and frightful bridge. It was merely the trunk of a tree with one side shaved flat, thrown across the river at a height of between 40 and 50 feet above the water, which ran roaring and boiling along between two enormous masses of rock. A fall from this rude bridge would in all probability have been fatal, for should a person escape falling on the rock, he would inevitably be carried down by the torrent, and probably receive some stunning blow in his rapid descent, and be drowned before he could make an effort to save himself.

We hesitated for a short time, but finding no place to cross the river except at this bridge, we of necessity took courage and passed over one after the other, by holding the hand of a shikárí who preceded us. Even our hill people hesitated and one man did actually trust himself to the stream in preference. Two sheep attempted to cross but one of them slipping fell over, and was carried down a long way before he could get out again; the other one seeing his companion fall, turned back, jumped into the stream and swam across with some difficulty. The one that fell would not make a second attempt and was carried over on a man's back. Some of our dogs even were carried over!

After crossing this stream we climbed a hill for a few miles, till we came to a spring of water, where we stopped to breakfast and afterwards continued our route to a village called *Cabal* or *Khábar* where we encamped.

The natives of this place differed much in appearance from those of

the other villages we had passed. Many of them possessed a good deal of the Chinese cast of countenance, and had the beard and moustache growing in thin straggling tufts. Their eyes too were small and faces flattish. On their heads also they wore a different kind of cap, it being somewhat conical with a kind of tassel or button at the top. Others looked very like Jews and reminded me of the Bohras of *Neemuch*.

Many splendid elms and horse-chestnut trees, as also mulberries were growing here. During the autumnal months, the grass and other plants are cut and made into hay for the cattle during the winter; instead of being stacked, however it is loosely twisted into ropes of some length and then thrown across the branches of the trees near the villages, from whence a rope is taken as required. In other places it is made into small bundles and stuck or *filed* upon a long sharp pointed stake driven into the ground.

The horse-chestnut trees grow to a very large size, throwing out immense branches which yield a shade wide enough to encamp under; in October these trees were all bearing fruit nearly ripe, so that they must flower in spring or early summer. How beautiful must such enormous trees appear when covered with flowers!

We heard from these people that a party which preceded us to the *Búrenda* pass, had lost three men in a snow storm.

After leaving *Cabal* we proceded along the side of a barren hill, for some miles, and then gradually descended to a mill stream, where we breakfasted. These mills or *panchakkís* are very numerous on the hill streams near a village, five or six being often turned by the same water, within a few yards of each other.

After breakfast we continued our journey up a very long, steep and rocky height, having a beautiful valley below on the right hand, with the Pabbar river rolling and tumbling along through it, many waterfalls from the precipitous rocks on our right, contributed much to the picturesque beauty of the scene. We found the sun so powerful during this day's march, that we walked without our coats, and at length encamped beneath an immense walnut tree at a village called *Pekha* or *Piki*.

Here we were presented with a small basket of *Kanáwar* grapes and a quantity of very fine honey in the comb.

Bees are domesticated in almost every village throughout *Bassáhir*, but are not kept in hives in the open air as in Europe; the walls of the houses are made with several small square boxes in them which externally are even with the wall, and give egress and ingress to the

bees through a small round hole ; the door of this box or hive opens into the room, by which means the honey is easily taken out, and that too without, as in Europe, sacrificing a great number of the bees, for by blowing the smoke of burning grass or straw into the box through the doorway, the bees are driven out by the external hole, and thus the swarm is uninjured, and a portion of honey being left in the box, soon entices them back again.

In this village was a temple of *Devi* only half finished, and the villagers begged us to give them some quicksilver as they intended to consecrate the building in two days' time, and the mineral was required to complete the ceremony.

On the 8th we started at daybreak and breakfasted at *Janglig*, which is the last, and according to Dr. Gerard, the highest village in the valley of the *Pabbar*, being 9257 feet above the sea, and is the usual halting-place for travellers, being about six miles and a half from *Piki ;* but wishing to get on we proceeded another march through very pretty woods and interesting scenery to *Liti*. The latter part of the march, however, was wild and barren enough, no trees growing except a few straggling birches, and these ceased also before we got to *Liti*, the hills being merely clothed with rank grass and weeds.

Several kinds of rose trees were in abundance in these forests, and on the open hills many beautiful flowers were still in blossom notwithstanding their proximity to the snow and the lateness of the season. The greater part were, however, bearing seed or had shed it. Many flowers which on our leaving *Simla* were only just opening were here bearing ripe seed or had shed it, and the reason is obvious enough, for in these cold and elevated regions winter treads so fast upon the heels of summer that were the frost to set in before the seeds were perfected, plants would be destroyed and thus all animals, and in a few years perennials also, would become extinct : by flowering early and shedding their seeds before the wintery blast has power to hurt them, this is beautifully guarded against ! What care and foresight is here displayed by the allwise ruler of the seasons ; what circumstance or event, however minute, however trifling it may appear to us, if the well being of this world be at all dependent on it, is overlooked or disregarded by his most gracious providence ?

I collected great quantities of the seeds of a beautiful yellow flower called by Royle *Corvisartia Indica ;* this author gives *Pirpanjal* and *Cashmere* as the habitats of the plant ; I found it in flower on the side of *Hattu* mountain in the month of September and widely

spread over the open tracts between *Janglíg* and *Líti*, bearing seeds, and afterwards at an elevation little short of 14,000 feet, among the snows above *Líti*, where it was also abundant and in seed.

On this march the traces of bears were frequent. Near *Líti*, we passed one of the "cairns" above alluded to, and our servants placed a stone on it, passing on the right side of it, which we were informed was always the custom, it being considered unlucky to go the left side.

At *Líti* is a bungalow, or rather an apology for one, there being windows without glass or shutters, and the two rooms wanting floors and ceilings. It is evident however that the planks of the ceiling have been torn down to furnish fuel for travellers. We arrived late in the afternoon at this drear and desolate abode, which stands in a wild and totally uninhabited valley at the foot of the *Burenda Pass**. The neighbouring and surrounding hills were covered with snow, and rose frowning above us to a great height.

All cultivation and houses cease long before the entrance to the forest, and for seven or eight miles from *Líti* no traces of inhabitants are seen. The place is well calculated to strike a chill into the breast of a traveller, and tired as we were, with all our coolies in the rear, and with some fear lest they should not come up that night, we looked around us on the still cold scene, with no pleasant feelings.

The sun too, beginning to get low and the sharp cold of evening coming on, with still no signs of our coolies and baggage, we began to think of retracing our steps till we should meet them, and had actually commenced a retrograde movement, when some of the servants came up and told us that the coolies were not far behind, so we went back to the horrid looking bungalow.

Our people at last coming up, we got the tents pitched and gave up the bungalow to our servants, as the night promised to be bitter cold.

The water froze before 9 o'clock at night in our goglets and at daybreak the next morning the thermometer stood at 25°.

The day broke on the morning of the 9th October, with thin fleecy clouds flying about and the villagers who had come on with us from *Janglíg* with supplies of ottah, and who were in the habit of crossing the Pass, advised us not to attempt it that day, as it is always dangerous when clouds are about. We therefore deferred our journey,

* This pass, generally known to Europeans as the '*Burenda Pass*,' is called by the natives *Booren ghátti* and *Bráoang ghátti*. The last name is derived from that of a village on the *Kanáwar* side.

We therefore deferred our journey, and ascended another hill overhanging *Líti* on the right bank of the *Pabbar* from the top of which is a waterfall, forming a stream which running down past the bungalow gives it its name of *Líti* or *Lítung*, and empties itself into the *Pabbar*.

Near the top of this hill we crossed an immense bed of junipers, bearing flowers and berries with the same strong flavour as those of Europe. These were growing at an elevation little short of 14,000 feet and above the lowest line of snow, yet here among the moss scattered beneath them, I found shells of the genera *Nanina*[5] and *Bulimus*. The difference between these and others apparently of the same species which I discovered at *Mahássú* and *Hattú* consists in size only.

In the former localities they are larger and less ventricose in the whorls, but the colors and markings are the same, as it would also appear are their habits, for at this spot, where snow lies for a great part of the year and which borders on the regions of eternal snows, the animal closes the aperture of the shell with the same thin gumlike substance as those of the warmer hills of *Mahássú*.

From *Liti* to the waterfall, is a steep and somewhat difficult ascent, of about 2000 or 2500 feet, after which a flat piece of land walled round with lofty snow-clad peaks, presents itself, through which the stream that supplies the waterfall, and which owes its origin to the snows above, slowly winds along.

Here I found some beautiful flowers growing among the moss and lichens above which they scarcely peeped, as if afraid to lift their heads into the chill and desolate region around them. Some of them occur in Royle's work on the Himálayan Flora such as "*Dolomiæa macrocephala*," which was abundant and in flower! and "*Corvisartia Indica*," widely spread and in seed.

Numbers of shrew mice (*Arvicola*) are found at *Lí'i* and high up the hills around it, as also a species of marmot[6]. This latter is about the size of a large rat, but the countenance and general formation externally have more the appearance of a young rabbit than a rat, especially as the tail, so conspicuous in the rats, is wanting in this little animal. One of these we were fortunate enough to capture; the length was scarcely six inches. Upper incisors with a deep groove; fur above deep gray like a rabbit, with a reddish tinge over the head, shoulders and sides. Whiskers very long. Ears rounded. It seems most nearly to approach the *Arctomys Bobac* of Desmarest, or *Mus arctomys* of Pallas, which is said to be found in *Poland* and northern *Russia*, but the length is given as 15 inches, whereas this is barely six.

They burrow like rats on the side of the grassy hills. Some of our party said they saw much larger ones than that above described, in which case there were two kinds, as our specimen, judging from the teeth, was decidedly adult.

Royle figures an animal very similar to this, which he obtained from the *Chor* mountain, under the name of "*Lagomys Alpinus*," Desm. or "*L. Pika*," Geoff.

I hesitate to decide whether our animal is distinct from that of Dr. Royle because the specimen was so stiffened and dried when I had leisure to examine it, that I could not ascertain whether the incisors were those of *Lagomys* or *Arctomys*, and it is possible that what I considered a groove in the upper incisors, may be the separating line of the teeth, and in this case I should consider the animal identical with Royle's. I shall soon be able I hope to decide, as men are gone in search of specimens, both to the *Chor* and *Burenda Pass*.

After staying a short time in this dreary spot and collecting as many seeds as I could conveniently carry, I followed the rest of the party who had already got far on their way down again, for the clouds had now gathered all round very heavy and promised a storm; the wind too became high and bitterly cold and very shortly after we had regained our tents, we experienced a fall of hail, while up the dreaded *Pass*, the snow was falling fast and made us sensible of the risk we should have run in attempting to cross it on such an uncertain day.

After the storm, which did not last long with us although the pass continued obscured and hazy, I went a short way up one of the hills to gather the seeds of some plants I had observed in the morning, and was in a shower of snow all the time; some of the party went up another hill a little way and experienced the same thing, while around our tents it was all clear again.

The seeds alluded to, were of a pretty little plant very abundant near *Litt* bungalow, called by Royle "*Gualtheria nummulariöides*;" the seed-pods were of a bright blue color, and as numbers were growing on the same plant, they had a very pretty effect, peeping half hidden from behind the small dark green leaves. Here, also, I found a large bed of wild shalots.

At night it became very cold and a sharp frost set in; the thermometer at daybreak again standing at 2?°, and at sunrise or when the sun topped the easternside of the *khad*, it stood at 29°.

10th October. Thin clouds were seen as yesterday, but owing to a good deal of discussion having taken place the previous evening, we determined to try the *Pass*, intending merely to look over it and return.

For this purpose we took a guide and started. The path from *Lití* wound along the side of a bare hill through a glen, which gradually became more confined and rugged, as we neared the *Pass*. On either hand, steep precipitous rocks towered above us to the height of about 3000 feet; near their base on the left of the *Pabbar* a few straggling birches were seen, and not far above them commenced the snow which became gradually deeper towards the summit of the cliffs. Along the bottom of this narrow glen, ran the *Pabbar* river, roaring and foaming as it dashed along over the rocks and stones, in its rapid and headlong descent from an immensely thick field of snow, to the left of the *Pass*, from which it takes its source. The end of this frightful glen is closed by the *Burenda* or *Bruang Pass*, whose highest peaks tower up to the height of 16,000 feet above the level of the sea.

Our guide watched the sky very narrowly during our approach to the gorge, and did not seem to think we had chosen a very favorable day for our ascent. Every thing was calm and still as death, and not a living creature was seen save the little marmot darting into its hole and the vulture-eagle roaring aloft over the snow-clad rocks. As we advanced however we heard the heavy sound which in mountainous countries often foretells a storm, and which I had heard on the preceding day. Similar sounds are emitted by some of the Scotch hills as *Bein-douran* in Glenorchy, and even the great falls on the river *Tummel* north of *Shichallain* are said to give warning of the approaching tempest*. The highlanders call this the "spirit of the mountain shrieking," and our guide seemed to entertain some idea of the kind, for he stopped and, turning to us, said something in his unintelligible hill patois, which to us sounded like, mallah banch bolta hai†."

Far above us, among the snows that crested the rocks to our left, we saw some of the *Bharal*[6] or wild sheep which are only found in the most inaccessible places.

We had now ascended some way and our breathing began to be affected, obliging us occasionally to pause and rest.

Before us lay the *Pass* now plainly laid open, and beneath it, to our very feet, was spread a bed of broken and disjointed rocks of every

* Stewart's History of the Highlanders.

† Although we made him repeat the words several times, we could make nothing of it, and therefore construed them after our own fashion, viz. that "*Mother Bunch* was speaking!!" The guides declared that when these sounds were heard thrice during the day, i. e. morning, noon and evening, it was a sure sign of a storm or bad weather. [Queré *Himala* '*bach*' *bolta hai*, 'the mountain cries 'escape.'—Ed.]

size, hurled together in wild confusion from their original position on the heights above by the combined effects of frost and heat, each succeeding year apparently adding something to the general wreck produced by the wintery warring of the elements since the world began. Over these disjointed masses was spread an almost unbroken sheet of driven snow, which concealing alike the rocks and chasms beneath, proved a difficult and somewhat treacherous path.

Whilst pausing here to take breath, we espied something red lying beneath a ledge of rock at no great distance from us, and sending a man to reconnoitre, found it to be a human body rolled up in a red rezaí and frozen to death!

Our guide now without speaking, resumed the path at a quick pace as much as to say "make haste, or you see what might happen." We followed and a very few paces again brought us to another frozen victim lying on our path.

His head was bound up in his waistband and part of it drawn across his eyes, as if to protect them from the driving snow, and he had fallen apparently exhausted on his back, with the left arm outstretched and the hand clenched; one leg was drawn up and much cut by the stones among which he lay, while the other was extended. The mouth was open, but the eyes were partly closed, probably from the pressure of the bandage over them. These two poor wretches were part of Dr. Powell's attendants of whose loss we had heard at *Cabul*. Soaring round above the body were a pair of vulture-eagles[s], who seemed waiting for some assurance that life was extinct ere they ventured to descend to their repast. The body was still fresh and emitted no stench whatever, owing to the coldness and elevation of this desolate region, although it must have lain there for at least a fortnight, the party having been overtaken by a snow storm about the 26th of the previous month (September) at which time we had rain at *Nágkunda* and remarked the unsettled appearance of the weather over the snowy range. The bearded vulture waited but for some token of decomposition to pounce upon his prey, and until such took place, (so healthy appeared the body) he could not distinguish between sleep and death!

Is not this additional evidence that, "sight and scent combined," are the means by which the vulture is directed to his prey? His quick eye had rested on the prostrate form below, but effluvium was wanting to assure him that the banquet was prepared.

The sight of these poor frozen wretches, apparently in rude health at the time of their death, damped our spirits a good deal and we

pushed on towards the summit, now fully convinced that the stories we had heard, of the dangers of the *Pass*, were but too well founded.

Three of our party had reached the top, but I was still about 200 yards from it, feeling so sick and my head aching so much from the reflection of the sun on the snow, over which we were climbing, that I could not walk fast, which the guide perceiving me at once said, "We cannot wait here, so come down," and away he went, followed by the party who had gained the summit, for the clouds had gathered thick and fast during our ascent and promised a storm. On passing me, they warned me to turn and I nothing loath obeyed them instantly.

The time occupied in ascending and returning was about 4½ hours, and we had scarcely arrived at the encampment, when snow began to fall, and sick of the spot from the frightful and desolate scenes we had witnessed, orders were at once given to strike the tents and we marched off towards the forest on the road back. Never was an order more cheerfully obeyed or an encampment more speedily struck than was ours, and a smile gladdened the face of each shivering coolie as he trudged along beneath his burthen, from those regions of gloom and death.

Hail and snow fell occasionally during our march and at last we halted for the night in the forest about six miles from *Líti*, having walked at least eighteen miles during the day, and all right glad to get away from the horrid place we had left.

It afterwards proved that we had not left the Pass a minute too soon, for the next morning the ground was white with snow as low down, as our encamping ground at the bungalow! The forest near *Líti* abounds with game of the pheasant tribe; we did not stay to shoot however, as we were anxious to get back to *Simla*, some of the party being obliged to return to the plains. A monaul was killed and several others heard as also plass. A bear too was followed by a shikárí but without success.

On our return from *Líti* we fell in with three or four men from *Janglig* all carrying skins of attah on their backs; they told us they were going across the *Pass* into *Kanáwar* to barter their flour for salt which they sell to the neighbouring villages. That night they would sleep near the foot of the *Pass* beneath some bold projecting rock or at the bungalow, and push across the next morning while the weather was fine and the day before them. The storms seem to gather and break about the turn of the day, or one or two o'clock in the afternoon.

On the morning of the 11th October we proceeded to *Janglig* where we again stopped to breakfast after a downhill march, beneath a grove of large elm and horse-chestnut trees. Here we found immense quantities of small garnets imbedded in the mica slate with which the walls are built. After breakfast we proceeded down a very steep and rocky road to the banks of the *Sapan*, a stream which empties itself into the *Pabbar*, and over which is a tolerable sankho; from this our road lay through a very beautiful glen on the banks of the *Pabbar*; it was thickly wooded and by the side of the path many beautiful flowers were growing, and among them several species of *impatiens* or wild balsam, one of them of a pure milky white.

This day we encamped again at *Píkí* which has an elevation of 8759 feet. The distance from *Janlig* is about $6\frac{1}{2}$ miles.

From *Píkí*, instead of retracing our steps to *Simla*, by the route we had come, i. e. keeping the heights and marching across the ridge of the hills, we proceeded by the regular road down the valley of the *Pabbar*, which is a most beautiful and richly cultivated country, with the river from which it derives its name running through it. The crops are chiefly rice and are abundant. Pulse of several kinds is also grown here.

From the accounts we had heard, before leaving *Simla*, of the poverty of the natives and the scarcity of supplies in the interior, we were prepared to see a country almost void of cultivation.

This, however, is far from being the case, and in the valley of the *Pabbar* especially, the luxuriance of the crops could scarcely be exceeded. Indeed, throughout our trip, nothing could be more opposed to such an idea, the natives stout and healthy in appearance, their clothing good, and crops luxuriant: every thing in fact bespeaking abundance. That they have sometimes little to spare to travellers, does not arise from any want of necessaries, but is solely attributable to their sending all the grain out of the country, keeping merely sufficient for the wants of themselves and families, and exporting the surplus which is great, into *Kanáwar* and the higher states where grains are not so easily cultivated, and where therefore they find a ready and profitable market. This surplus is either sold, or bartered for salt and other necessaries. Their rents, too, are often paid in kind; that is, in the produce of their lands. Thus it not unfrequently happens, that the very people who are striving to impress upon the mind of a traveller, that they are pinched by want and poverty, are in fact comparatively rich, and this dissimulation is prompted by their avarice as an excuse for extorting a heavy remuneration for the pittance doled out to him.

Proofs of this occurred to us more than once when we had occasion to demand supplies for two or three days, for, by offering an advanced price very little difficulty occurred in furnishing the necessary quantum.

In the valley of the *Pabbar* the standard grain is rice, which is either sold or bartered in *Kanáwar* and *Nawur* for salt and iron. The *khèts* are well irrigated by the numerous rills and mountain streams which flow down to join the *Pabbar*, thus causing little, or none of that hard labour, which falls upon this class of cultivators in the plains of India. In lands which are warmly situated and where two crops are produced, the principal grains are barley and several species of millet; the former is sown in March and April, and gathered in July, when the land is again made ready for the reception of the other grains, which are reaped in the autumn. In higher and less favoured situations and where only one crop can be perfected, the celestial and common barley, wheat and millet are sown in spring and reaped in September and October. Many other grains are also extensively cultivated, such as *bhattu* (a species of *amaranth*), cheena and *kodah*, *(panicum miliaceum* and *paspalum scrobiculatum.)* Besides these, various garden vegetables are cultivated in small quantities for home consumption.

The fruits are walnuts, apricots, wild quinces, peaches, and plums, none of which however are of any value owing to neglect and want of pruning and seldom ripen in the higher tracts. In a country where such endless varieties and gradations of climate and soils are at command, these and many other fruits might with little trouble be successfully cultivated and yield both a useful and profitable addition to their diet and exports.

The valley of the *Pabbar*, downwards from *Janglíg* is so level and presents so few difficulties, that, were encouragement given to the project, a line of road might possibly be traced out, through the valleys of the lower hills and made to debouche upon the plains. This if once effected would enable hackeries and other wheeled-carriages to penetrate to within two marches of the *Burenda Pass*, or as far as the village of *Píkí*, and offer a readier and cheaper means of conveying the products of the interior to the plains, than the present slow and expensive mode of carrying every thing on men's backs. So also the produce and luxuries of the plains would contribute in no small degree to the refinement and pecuniary advantage of the rude mountaineers, and by giving them a more extended field for speculation, encourage them to throw aside their idle habits and turn the mineral

and agricultural resources of their yet almost unexplored countries to some account.

The articles of barter and sale among themselves, and their exports, consist now of wheat, common and celestial barley, bhattu, rice, ogul opium, tabacco in small quantities, tar, turpentine, kelu oil, apricot oil, raisins, currants, ginger, neozas, iron, borax, salt, leathers and skins, chowries, blankets, woollen caps, shawl wool, potatoes, tea, and honey. The wax, too, if separated from the honey, would be an additional and abundant article; at present it is mixed up and eaten with the honey by the natives. Iron though abundant in some parts is nearly doubled in price by the time it reaches the plains owing to the mode of conveying it by coolies and the taxes levied upon it by the chiefs through whose states it has to pass.

The cattle on this side the *Himalayá*, consist of a small herd of cows and oxen, mules, sheep and goats. The sheep are pastured over the open grassy tracts of the upper hills and constitute one of the chief sources of profit, by furnishing good wool for blankets and other woollens, both for export and home consumption. Oxen are used in ploughing in the valleys, and on the hill sides when not too steep, but where the slope is great or the space confined, the ground is dug and cleared by the women, on whom indeed almost all the drudgery devolves, the men, when not engaged in transporting the produce of their farms, preferring to make woollen shoes, caps and blankets, or to lounge about idle in the villages.

That these mountains contain mineral treasures of no mean value there can be little doubt, and were research encouraged in this branch, some important results might ensue.

To some valuable discovery, made near the *Gangtung Pass* on the road from *Dabling* to *Bekhur* on the confines of Chinese Tartary, the hints dropped on his return, by the enterprising traveller M. Jacquemont, no doubt referred; why else, should he have evinced so much anxiety to prevent any European from visiting that quarter, until he should be able to make known his discovery to the French government and return under their auspices to avail himself of it?

Report says, that he earnestly entreated Major Kennedy, not to allow a European to visit that *Pass*, until his return, and added that he "hoped whoever attempted it, would fall over and break their necks*!!"

* "If an Englishman go thither, never mind;—but if a German or a French naturalist visit it,—give your guide a hint to walk him over the precipice"—was the expression, in *badinage*, of the enthusiastic traveller; certainly betokening

What the discovery was he would not divulge, but from his eagerness to shut that route to future travellers, it was doubtless of importance.

Particles of gold occurring in some of the hill rivers would lead to the conclusion that it must exist in the rocks, through which these rivers sweep, and becomes detached by the rush of waters. That gold therefore, was the discovery hinted at, is neither impossible nor improbable. It is certain that none but the precious metals would have been worth the notice of the French government.

The subject is perhaps worth inquiring into and research directed to that quarter, might bring the hidden treasures to light.

After breakfasting on the road at the same mill stream we had stopped at in coming, we pushed on as far as *Shèrgaon*, where we encamped for the night after a walk of about eight miles through a lovely valley. The village of *Shèrgaon* stands at the point of confluence of the rivers *Undraitee* and *Pabbar*. The former stream runs down through a valley of rice fields, the produce of which is held in much estimation and is reserved, we were told, for the use of the rája of *Rampore* to whom the country of *Busahir* belongs. Several of the houses in this village had small patches of flower ground, and the "Marvel of Peru" with its various colored flowers was very abundant.

On the 13th of October we left *Shèrgaon* and proceeded $11\frac{1}{2}$ miles to *Rúrú*, intending to breakfast on the road, but so well was every inch cultivated that we could find no convenient place to pitch a tent, and were therefore obliged to wait till we arrived at the village; we afterwards marched four miles farther, leaving the regular road and striking up again to the heights on the right of the valley. The whole of the march from *Shèrgaon* to *Rúrú*, is most luxuriant in rice crops, and the appearance of the natives bespeaks abundance.

Between these two places we met several Sikhs who reside in these parts and carry on a traffic with the plains.

Our camp was pitched near a small hill stream from which some fishermen brought us a dish of delicious trouts. They catch them in rather a novel manner, placing across the stream a long rod on which are fastened at short intervals a number of hair nooses, into which

that he had some curious discovery (probably of fossils) of which he would secure the first honors; and affording an amusing estimate of national curiosity.—Still is it not confirmed by the fact that no Englishman has since sifted the nature of JACQUEMONT'S interest in that spot?—ED.

the fish are driven by a man who gets into the stream and turns up the stones as he approaches the rod.

From their attitude, we at first thought they were tickling the trout as they do sometimes at home. I have seen the same fish brought from a stream below *Subathú*, and they appear to be identical with that described by Dr. McClelland as the mountain trout of *Kemaon*.

The mode of capturing them is, however, somewhat more ingenious than that mentioned by him.

Chicores and black partridges[5] were abundant at this place.

On the following day we continued our journey up the hills, breakfasting as usual on the road and encamping, after a long and steep ascent the whole way in a hot sun, on an open hill about five miles from our old encamping ground at *Tútú*.

Monauls, plass and chicores abundant.

On the 15th October we proceeded through a thick wood over very slippery paths and encamped once more at *Tútú* on the heights.

Here we found a man who had come from our last encampment to beg for some remuneration for the loss of a fine hill dog which guarded his flocks. One of our party had been chased by him, while shooting near the sheep fold, and finding a volley of stones insufficient to keep the animal from seizing him, he was at last obliged to fire in self-defence in the dog's face, from which the man said he was dying.

As a dog of this dog kind is invaluable to these poor people, he received a sum of money to enable him to purchase another and went away quite satisfied.

From *Tútú* we went next morning to *Bagie* where some of the party found their ponies awaiting them, and after breakfasting and resting awhile we continued our march, skirting *Hattú* and at last arrived once more in safety at *Nágkunda* bungalow.

At this place two of our friends left us on the following morning on their way to *Simla*; the remainder of the party halted here one day, and on the morning of the 18th October walked to *Mattiána*, through the forest across the tops of the ridges, which is a shorter and more beautiful route than by the made road.

Numbers of monauls and plass pheasants were put up and also a musk deer.

After breakfasting at *Mattiána* which we reached after a walk of 3¼ hours, I also deserted and made the best of my way to *Simla* where I arrived on the evening of the same day.

Miscellaneous and Zoological notes to the Journal.

[1] *Flowers.*—Among the most common are the "*Anemone discolor*," "*Potentilla pteropoda*," "*P. Cautleyana*," "*P. Saundersiana*," "*Chaptalia gossipina*," "*Parnassia nubicola*," "*Campanula cashmeriana*" and "*Hermineum gramineum*," of Royle. These are found at *Simla* and for several stages into the interior. Also a species of Columbine (*aquilegia vulgaris?*) and that curious flower "*Ceropegia Wallichii*."

[2] *Lepidoptera.*—Butterflies.

Fig. 1.* "Swallow-tailed butterfly;" "*Papilio machaon*." This is found at *Simla* and in the interior. It does not appear to differ from the European insect.

Fig. 2. Is a species which was captured in the *Serdree* jangals, near *Neemuch* and is now in my cabinet; it is here figured to show the approach to the "scarce swallow-tailed butterfly" of Europe, "*Papilio podalirius*;" it is, however, smaller than that insect and wants the eyes or ocellated marks on the wings, and it differs also in the distribution of the dark bands. It is probably not unknown to science, but is figured to show the affinity to "*P. podalirius*," and with the hope that some naturalist may favour me with its name, as I have failed to recognise it from descriptions.

Fig. 3. "Tortoise-shell butterfly;" "*Vanessa urticæ*." The larva feeds on the nettle and is like that of Europe; it is found in May and again in July. The chrysalis or pupa is suspended by the tail. This is one of the commonest and most hardy of the Himálayan insects, and is found all the year round, winter not excepted.

Fig. 4. "Painted lady;" "*Vanessa cardui*, (*cynthia.*)" This is also common and found throughout the year like the last. I have seen both and also *Vanessa polychloros*, sporting in the sun, even when the ground was co vered with snow. It also occurs very plentifully at *Neemuch* during the rains.

Fig. 5. "Large tortoise-shell butterfly;" "*Vanessa polychloros*." This is not so common as the small species, but is also a hardy insect, and may be seen during the winter months, sporting about in the sunshine.

Fig. 6. "Himálayan admiral;" "*Vanessa Vulcania*." This is very closely allied to the European admiral, but the Rev. Mr. Bree, who compared the insects in England, seems to think them distinct. See *Loudon's* Mag. Nat. Hist. from which I have copied the figure. It is not uncommon during the summer months. It occurs also at *Neemuch*.

"*Argynnis Aglaia*." This is only met with during the summer and early autumn. It scarcely differs from the European insect.

Fig. 7. "Marbled white butterfly;" "*Hipparchia galathea*." This is found during summer and early autumn. It is a variety only of the European insect.

* We are reluctantly obliged to omit the plate (or rather two plates) of these illustrations. Without color, however, justice could not be done to them.—Ed.

Figs. 8 and 9. "Large cabbage butterfly;" "*Pontia brassicæ.*" This is a very common species, appearing in March, April, May, June, and July. In the latter month it is scarcer, as are all the hill species, owing to the constant cloudy and rainy weather. The larva feeds on the cabbage, turnip, and other plants.

Figs. 10 and 11. "Small cabbage butterfly;" "*Pontia rapæ.*" This is also a common species during the summer months.

Fig. 12. "Brimstone or sulphur colored butterfly;" "*Gonepteryx rhamni.*" This beautiful insect is very common at *Simla* and the interior. It appears as early as March, and is one of the latest on the wing in autumn. There is another species or variety found here in March and April, which has the superior wings of a bright sulphur like the male, and the posterior wings nearly white as in the female.

Fig. 13. "Black-veined white butterfly;" "*Pieris cratægi.*" The most numerous of all and of every size during May and June. The pupa is supported by a silken band round it.

[3] *Coleoptera.*—Beetles, *Lucanidæ*, or stag-beetles. ROYLE figures a fine species of stag-beetle, which is not uncommon at *Simla* in July, under the name of "*Lucanus lunifer.*" The female is not given, but in color it is the same, wanting as usual the large jaws of the male, and being inferior in size; both sexes are highly pubescent when recently and carefully captured.

The color is a deep olive brown; head, thorax and elytra thickly clothed with soft hairs of a pale mouse color. The jaws of the female are short and stout with a square tooth in the middle. The legs are all spiny. Length of the male from the tip of the jaws two inches and a half; female one inch and a half. In addition to these I have collected here and at *Mahássú*, four or five other species.

The food of the *Lucanidæ* being yet but imperfectly known, although it is supposed to be the sap of trees, it may not be amiss to remark that I have repeatedly found them feeding at the base of oak trees, their bodies half buried in the earth, wounding the origin of the roots with their jaws and greedily sucking up the juice as it exuded.

Cerambicidæ, Capricorn Beetles. I have taken more than 20 of the larvæ of one species out of a decayed oak tree. The insect which destroys timber in the plains, which is often heard gnawing in the legs of tables and chairs, and usually known by the name of the "Carpenter" from the noise it makes in boring; is the larva of a species of Capricorn beetle.

Elateridæ, click beetles. These are the beetles, that, when laid on their backs, can by a sudden jerk of the head and thorax, throw themselves again on their legs. In my school-boy days, they were known by the name of "backjumpey."

There is a very common beetle at *Simla* during the rainy season, which I believe to be the "*Scarabæus Phorbanta*" of OLIVIER'S insects. It is chiefly found in heaps of cow-dung. OLIVIER gives *Senegal* as the habitat, but his characters which I subjoin, agree so closely with my insect, that I must consider them identical.

"Scarabæus scutellatus, thoracis cornu incurvo apice bifido, capitis recurvato bifido.

"Scarabæo gedeone paulo minor; capitis cornu recurvo apice bifido, absque dente. Thorax niger, lævis, nitidus, cornu magno, porrecto, incurvo apice bifido. Elytra lævia, brunnea: differt à Scarabæo gedeone, cornubus minoribus absque dente."

These characters are so good, that a description of my specimen would be but a repetition.

The female is similar in colors, but has no horns on head or thorax. They emit a squeaking noise when touched, which proceeds, as in many other species, from rubbing the extremities of the body and the elytra together.

These beetles differ considerably in size and in the development of the prominent projection of the thorax, some having it large and well defined, while others have scarcely any signs of it. And yet though they thus differ, they must still be regarded as one and the same species, because all couple with the same females, which also differ much in size. This difference arises from the various degrees of nourishment which the larvæ have procured, for those which obtain a plentiful supply of food, will grow to a much larger size than those which have been stinted in this respect.

The many varieties of a species arise chiefly from such causes, as a scarcity of food and prematurely becoming pupæ, (which change many undergo on finding their supplies exhausted.)

The pupa also, may be placed in an unfavorable situation, and therefore will not produce so fine a specimen as one which has been more fortunately placed. The pupæ of beetles, and perhaps, of most kinds of insects, which are buried in the earth require a moderate degree of moisture to bring them to perfection, and it may be said that even in this state, the animal receives nourishment.

In proof of this, I took a number of the grubs or larvæ and the pupæ of the present species, as well as of some other kinds, and placed them in a box of earth similar to the soil in which they were found. Many of the larvæ died from not finding sufficient nourishment, while others which were in a more forward state, became pupæ, but these were always much smaller than those which had been full fed.

The beetles produced from these were consequently small and the development of the horns very slight. The full-formed pupæ which I had taken, were placed, some *in* moist earth and some *on* the *surface* of it. Those which were buried and received nourishment from the soil, produced fine healthy beetles, while on the other hand those which were on the surface or only partially buried, produced imperfect specimens, the wings being shrivelled up and never coming to maturity, while again numbers of the pupæ dried up and never produced anything.

This circumstance satisfied me that nourishment was as necessary to the pupa, as to the larva and imago, and although the two latter alone take food, yet moisture and warmth are felt and imbibed by the pupa, and are as necessary to the

formation or production of a perfect and healthy insect, as food is to the larva. If moisture be withheld, the skin of the pupa shrinks and hardens and the insect has not room to expand and perfect its parts.

From this cause I am led to believe that many varieties, have been unnecessarily raised into species and described as distinct.

The mere circumstance of their differing in size and proportions can never really separate them; as well might two brothers be deemed of distinct species because the one happens to be six feet in stature and the other a dwarf. Such a comparison is by no means absurd, because many of the ova deposited by our female, will eventually produce large and well-formed insects, and the rest produce their diminutives. These, therefore, can never be received as more than mere varieties of each other, and indeed I can scarcely consider the offspring of the same parents as varieties at all. The offspring of two females of the same species may possibly be reckoned as varieties of the same, should they happen to differ; but surely the hildren of one mother, produced at one birth, must be to all intents and purposes one and the same species.

Thus when two insects of the same species differ merely in size and the greater or lesser development of horns, spiny or other processes, they may be termed "Varieties." But a difference in structure, habits, food or general economy would alone authorize their being classed as distinct species. By difference in structure, I would be understood to mean, of different forms, because the mere circumstance of a horn or spine being greater or less, in some, than in others does not constitute a different, but only a greater or less development of the same structure.

It is perhaps a remarkable fact, that almost every species of *Coleoptera*, has its diminutive, and the only way, in which to account for this lies, I think, in the abundance or scarcity of proper nourishment they receive in the larva and pupa states.

While speaking of insects, it may be as well to observe that it has hitherto been received as a rule, that sexual commerce is unknown to the larva state; this rule cannot now wholly apply, as during the past year, I have repeatedly seen the larvæ of a species of grasshopper in connexion during the summer months, at *Simla*.

[4] *Land Snails.*—Two species of *Nanina*, one (or two) of *Bulimus* (reversed) and one of *Clausilia*, being new to science, will, with many others, shortly be described in a separate paper and submitted to the Asiatic Society. "*Clausilia elegans*," nobis, is sadly destructive to the oak of these mountains, which they seem to prefer to all other trees. They bore into every crevice and live in the rottenness they have created, grinding and reducing the fibre of the wood to the consistency of wet sawdust.

In the 3rd No. of the Journal of the Asiatic Society, Dr. Royle observes, that the shells of these mountains do not differ from those described by Mr. Benson as occurring in the Gangetic provinces. Of twenty species which

I have been fortunate enough to discover since my arrival at *Simla* in 1836, there is perhaps only one species identical with those of the plains, all the others I believe, being new to science. It is not very surprising, however that Dr. ROYLE should have committed this error, because the shells I allude to, being of retired habits and only found in situations, to which his pursuits would scarcely lead him, would of course escape observation, whereas the species which probably led him into error, is found, during the rains creeping up every plant and shrub, and is the most numerous of any species. It is the "*Nanina vesicula*," of Mr. BENSON, found by him at *Rajmahal*, and by myself at *Neemuch*. It is abundant from *Monee majrah*, at the foot of the hills, to *Simla* and *Hattú* mountain (10,656) and probably farther into the interior.

I found a reversed species of *Bulimus* at the *Burenda Pass* at an elevation little short of 14,000 feet, which I imagine is higher than the living species have ever yet been found.

[5] *Birds.*—Plass or Pucras pheasant; "*Euplocomus pucrasia.*" This bird is called by the hill people in different parts, plass, pokrass, koklass and kokrass. They are usually found in pairs and are rather shy birds. They do not bear confinement well, but pine and die in a short time. A very indifferent plate of this beautiful species occurs in the Naturalist's Library.

The breeding season is the latter end of April and all May.

College or khallidge pheasant, "*Euplocomus albocristatus.*"

This is called the college pheasant, but oftener "*Múrghi*" or fowl, by the hill people. They thrive well in confinement and might with a little attention be added to the poultry yard. Their flesh is white and delicate. The tail feathers of the male bird are somewhat arched and approach in this respect the genus "*Gallus.*" The tail is generally elevated when the bird is in motion.

These are the most abundant of the pheasant tribe in the hills and are often seen in small parties. They seem to frequent moist and wooded *khads*, whereas the plass prefers the heights. In the winter numbers are brought to *Simla* for sale at three or four anas a piece.

They breed, as the last species.

Monaul, or Bunaul; "*Lophophorus Impeyanus.*" This and the two foregoing are common from *Núgkunda* to the *Burenda Pass*. In the winter they come down close to *Simla*. They prefer forests on the hill side, in which is plenty of brushwood. They are not difficult to tame but do not live long in close confinement owing to the want of proper roots, &c. which in a wild state they are very fond of.

They breed in May.

As specimens, these and the above birds, are not worth shooting from the month of June until October, during which time they are in moult. The note of the male is a loud and musical whistle which he repeats quickly when alarmed.

They may be ascertained to be in the neighbourhood, by the holes they dig with their bills in the ground, in search of roots and insects.

In addition to these three pheasants, are found the "*Cheer*" and "*Jahgee*" or horned pheasant. The latter is only procurable during the winter season, and that only in the interior, near the snow. The shikáris who bring them stuffed to *Simla*, say that, as the winter becomes more rigorous above, these birds descend before the snow; they are inhabitants of the higher and colder regions of *Kúlú* and *Bhotan*. They live in pairs, it is said.

The only species brought to *Simla* is the "golden-breasted Tragopan" (*Tragopan Hastingii*). It is known here as the Argus pheasant. The young males have the plumage of the female, with a rufous throat.

The "*Cheer*" is a beautiful bird and has more of the character of the true pheasants, than any of the others; it is found in the neighbourhood of *Simla* during winter and is not scarce. Their food consists of acorns and other seeds, as also insects. The largest bird in my collection (and I believe in *Simla*) measures in length from the tip of the beak to the end of the central tail feathers, forty-four and a half inches.

Another bird called the *Bhyre* or *Bhair* is found on the verge of the snows during winter but the shikáris say, they know not where it comes from. They live in covies like the chicore (*Perdix Chukar*), but are much larger birds. The plumage somewhat resembles that of the *Ptarmigan* in its summer plumage. By some it is called the "Ladak partridge."

Chicore; "*Perdrix Chukar*." These well known birds are numerous on the sides of bare hills near cultivation. They are easily detected by the noise they make in calling to each other. They are good eating and are sold during the winter at two anas a piece.

Black partridge; "*Perdix Francolinus*." These birds are by no means scarce in the hills, but they confine themselves to *khads* near cultivation.

Woodcock; "*Scolopax rusticola*." Is found at *Simla*, *Mahássú* and *Fágú* in *khads* near water-courses. It is probably also to be met with farther into the interior. The time of arriving at or leaving these places is unknown, but I have seen them at *Mahássú* in the beginning of August, and have had them brought to me from *Fágú* in April. It is therefore not improbable that they remain throughout the year and breed in the last mentioned places, that is in the forests of *Mahássú* and *Fágú*, where, ascending to the heights or descending into the depths of the *khads*, they can very sensibly change the temperature.

At *Simla* they have been found in November.

Three species of the *Scolopacidæ* mentioned by Mr. HODGSON in the GLEANINGS IN SCIENCE as inhabiting *Nepal*, are found here and in the interior; viz. the woodcock, *(Scolopax rusticola;)* woodcock snipe, *(Scolopax gallinago,)* and the solitary snipe *(Gallinago solitaria)*.

I have not been able to learn as yet that the common snipe *(Gallinago media)* is found here.

Chough or red-legged crow; "*Phyrrocorax graculus*." These do not appear to differ from the European birds. They are numerous among the rocky heights of the interior, from *Carrag* to the *Burenda Pass*.

Bearded vulture or vulture-eagle; "*Gypaetos barbatus?*" These birds are common at *Simla*. I do not think they are identical with the European bird, and shall shortly have occasion to mention them in a separate paper.

6 MAMMALIA.—Leopard. *Felis Leopardus.*

One of these animals entered the bedroom of Lieut. PENGREE 39th regiment, N. I. and seized a bull dog that was chained to the bed. During the struggle the chain was broken in two places, and Lieut. P. starting out of his sleep and seeing his pet dog beneath the leopard, he, without reflecting on the danger, instantly threw himself upon the animal and clasped him in his arms. Receiving a scratch from the brute's hind legs, *as a notice to quit,* he thought prudent to let go, when the leopard sprang through the door and escaped. The dog which was a powerful animal, was scarcely hurt.

I have a fine specimen which was shot by some villagers near *Simla*, who said he had destroyed several cows. He was a large male and rather exceeded the size given by FRED. CUVIER.

All animals should be measured previous to skinning them, otherwise an accurate statement in this respect can scarcely ever be given, as sometimes they are stretched in the process, and at others, have shrunk in the curing. The colors also should be noted previous to curing the skins or they are very liable to undergo considerable change.

Leopard Cat. *Felis Nepalensis; vel. Bengalensis.* This beautiful animal is about the size of a domestic cat and marked with dark spots and dashes on a tawny ground. Some are lighter colored than others. They are not easily got at, but cannot be called uncommon, though seldom seen.

They are found at *Simla, Mattiána, Píkí,* &c.

The natives of the hills apply the name of "*Laggarbágha*" to the leopard, while in the plains the same is used to denote the hyæna. The leopard cat, (so called by collectors,) is by the hill people called "*Chota Laggarbágha,*" and sometimes "*Laggarbágha ká buchhá*" or young leopard.

I have a very beautiful specimen alive, but so savage that I dare not touch her.

They breed in May and have three or four young at a birth, which are carefully deposited in caves or beneath large masses of rock.

The following is a sketch of my living specimen. Ears rounded and without tufts. Black at the base and summits, the middle space whitish. General color above, tawny, with numerous irregular spots of black or deep brown. Whiskers white with brown spots at the roots, arising from a white ground; lips white as also a stripe between the nose and the eye. A white patch on the cheeks surrounded with black forming two bands, the lower one turning downwards and uniting under the throat. Four dark lines along the head arising from the eyes and nose, the two centre ones forming a loop enclosing a dark spot, on the forehead.

Two oblong large brown spots on the shoulders or withers. Tail irregularly spotted to near the tip, where it becomes annulated. Feet with very small spots on a lighter ground; inside of the forelegs with one dark band, hind legs with two dark bands. Under parts white, spotted with black on the belly; somewhat banded with the same on the breast. An irregular line down the back, formed by a double row of oblong-shaped brown spots.

Fur soft; eyes brown.

I have a mutilated specimen which I bought from a villager at *Piki* in the interior; it has the ground color above rather paler than my living animal, but in other respects does not differ.

The length from the nose to the origin of the tail is about seventeen or eighteen inches, and the tail eleven inches, giving a total of about two feet, four inches.

I am doubtful whether this should be considered as the *Bengal* or *Nepál* cat: it certainly has markings in some measure common to both, and as the habitat of the former does not appear to be strictly known and the descriptions are supposed to be taken from immature specimens, it is possible that the two may prove to be the same animal. The only descriptions of these animals that I have access to, are contained in the Naturalist's Library, and the animal there given as the Bengal cat is said to have been received from *Java*. The plate does not agree with my animal although in some respects the description does. In the synopsis at the end of the volume it is called the Bengal cat with a mark of doubt affixed. It is said that the "species is hardly confirmed by any author." With regard to the *Nepál* cat the figure in some measure agrees, as also the description. It is taken from the Zoological Journal, No. 15.

Hill Fox. *Canis vulpes montana*—Pearson. During the winter, especially when the snow is on the ground, these animals are very numerous about *Simla*, and come close to the houses in search of offal or other prey. It has been well described by Dr. J. T. Pearson in the *Journal Asiatic Society*.

They breed in the end of March or early in April and have three or four cubs at a birth.

I have three young ones alive about seven or eight weeks old; they are similar to the old ones in colors, except that they are somewhat paler; the males are larger and much darker than the females.

These animals are not confined to the lower hills but range up to the verge of the snows.

I have a fine male specimen which was shot near the snow, and a female which I caught in a trap at *Simla* in May. She had evidently cubs not far off.

Canis aureus. The jackal is found also in the valley of the *Pabbar*. We saw several in the rice fields near *Shèrgaon*. At *Simla* I have often heard the cry, or what is said to be the cry, of the female, but the male, never, although I have seen them. They do not appear to hunt in packs as they do in the plains, but are seen singly.

Langoor. *Hanumán*. Entellus monkey. *Semnopithecus entellus*.

This species is found at *Simla* all the year through, but when the snow falls during the winter it seeks a warmer climate, in the depth of the *khads*, returning again to the heights as it melts away. I have seen them however, in a fine sunshiny day even with the snow on the ground, leaping from tree to tree up and down the hill of *Jakú* at *Simla*, which is 8115 feet.

Royle is mistaken when he says, that "the Entellus alone ascends in the summer months as high as 9000 feet." I have seen them at *Nágkunda* in August at 9000 feet, and in winter on *Háttú* mountain which is 10,655 feet; and in winter at *Simla* with snow four or five inches deep, and hard frosts at night, as high as 8000 feet.

Rhesus monkey. *Bundur.* "*Simia rhesus.*" This species I saw repeatedly during the month of February when the snow was five or six inches deep at *Simla*, roosting? in the trees at night, on the side of *Jakú* and apparently regardless of the cold. It is somewhat hazardous to walk below a troop of these latter animals, for in searching for acorns and other seeds, they turn up the stones which are apt to come tumbling down on ones head.

The *Langoor* ascends and descends, from and into the *khads* by prodigious leaps from tree to tree, while the less timid *Rhesus* confines itself to the ground and mounts the trees only when pursued or to roost at night.

Flying Squirrel. *Pteromys.*

These are beautiful animals and leap with amazing agility from tree to tree. Their food consists chiefly of the young leaves and tender shoots of the oak tree. They breed in the holes which they gnaw in the trunks of trees and generally have one young one at a birth. When at rest they wrap themselves partially up in the lateral membranes and curl their long bushy tails around their heads, like the common squirrel of Britain. They are easily tamed when taken young. I have offered them various kinds of food, such as grain, wheat, leaves of trees, &c. but although they will eat attah cakes the favorite food appears to be oak leaves. When feeding, they sit up on the hinds legs and hold the food in the forefeet like a squirrel.

I have a living specimen which was brought to me from *Nágkunda*, along with its mother when quite small in the month of February, so that it must have been born in the latter end of January. There is another species much smaller and of a gray color sometimes met with in the interior, but from the few specimens brought in, it appears to be scarce.

The present species is of a deep red brown, interspersed with gray hairs ; feet and tip of the tail black. Under parts pale orange.

I have no descriptions to refer to and therefore have not named it.

Wild goat. *Jehr. Capra jharal*—Hodgson.

We saw none of these animals during our trip, although our shikáris told us we crossed some of their haunts.

The Ghoral, (*Antilope Goral,*) and *Kukur* or Barking deer,(*Cervus Ratwa,*) are also met with at *Simla* and the interior. During the winter of 1835-36, a great number of the latter animals were killed in the snow, which lay in the month of February at *Simla* six to eight feet deep, and had not all melted away in shady places until the end of May !

Wild sheep. *Bharal. Ovis ammon.*

This animal is only found in the most inaccessible places among or verging on the snows. Their skins are brought down by the Tartars to the *Rampur* fair in November, and sold at about a rupee a piece. Their horns are presented to *Devi* and are hung up at the temples, or placed upon the cairns alluded to in the journal.

Musk deer. *Kastúra. Moschus moschiferus.*

These animals are found in the depths of the forest from *Muhású* far into the interior. They appear to be shy and solitary animals, lying singly in the most retired places, usually near some steep overhanging rocks. On being disturbed they bound away down the *khads* with great swiftness. The animal is of a dark

gray above, lighter on the inside of the limbs and beneath. The ears are large and usually carried erect. The males have no horns, but are furnished with two long recurved canine teeth hanging over the under lip from the upper jaw. The use of these, whether for defence or digging roots when the snow is lying on the earth in winter, is as yet, I believe, doubtful. The females and young males have neither these teeth nor the musk bag. It is a plump-looking animal and graceful in its movements, and when taken young is easily tamed. The natives of these hills call it "*Kastúra*."

A figure and description of this animal, taken from a specimen in the Edinburgh College museum appears in the "Naturalist's Library." The color is there given as "dark reddish brown," while all the skins I have seen of the musk deer of these hills were dark grey; in old specimens a faint reddish tinge was spread over the upper parts. Neither do the habits of the animal, as stated in that work, as far as I can gather from the hill shikáris and my own observation, agree with those of the animal known here as the musk deer. I transcribe a few lines, the better to point out in what the difference consists.

"Its habits, in fact, are similar to the chamois and some of the mountain goats, climbing and bounding among the precipices of the Alpine ridges of Central Asia with astonishing activity, assembling in herds, and often appearing in very considerable numbers." "They inhabit the region between *China* and *Tartary*, extending to the mountains above the sources of the *Indus*, and northward to near Lake *Baikal*.

At times they appear to migrate from one district to another, assembling previously in large herds. Some zoologists however have considered this assemblage not connected with migration, but consisting entirely of males in search of the female."

The *Kastúra* or musk deer of these hills is to be found in the deep forest shades of *Mahássú* throughout the year; I have seen them found from that place to the *Burenda Pass* and invariably single, sometimes a male, sometimes a female. The information obtained from the shikáris, is that they lie singly at all times except the rutting season, when a male and one or more females may be found together or near each other, but only for a short time. That they are never seen in herds. They breed in May and June at which season the shepherds in the interior catch the young ones.

I have seen the musk deer single in June, August, September, and October, and as they breed in May and June, they have only the most inclement season left for migrating, which is contrary to nature, as animals migrate in order to avoid inclemency. May there not be another species beyond the *Himálaya ?*

The color of the specimen in the *Edinburgh* museum may be owing to the preservation used in preparing the skin ! ?

It is generally supposed that the musk of this animal has some connection with the rutting season, it being strongest at that time. The idea I think is strengthened from the circumstance of the animal living such a solitary life, as the musk becoming strong at the season of love, is a means of guiding the females to the male, and thus the reason is plain why sometimes one and sometimes more females are found with one male; for in the almost endless forests of their haunts it may sometimes happen that only one or two deer may be found, while at other

times several may be in the neighbourhood. This idea too, is more probable than that the male should seek the female, which being destitute of the musk, could in these immense tracts leave no guide to the male.

The circumstance of the female seeking the male, is by no means an anomaly in nature, for the *Cicada* tribe among insects, and the *Gryllides*, are led to the males by the sharp noise emitted by them.

The same reasoning may apply to the *Civet Cats*, which likewise emit the strongest smell, during the season of love.

Marmot? *Arctomys?*

These animals live in very large societies and feed on grasses and roots. They burrow in the earth like rabbits, to a great depth, and the holes are so connected under ground, that it is almost impossible to dig them out.

During the winter months they remain asleep in their subterranean retreats. They are the tailless rats mentioned by TURNER, HERBERT, GERARD, and other travellers.

Thibet Bear. *Ursus Tibetanus.* These animals are numerous in the interior but only visit the neighbourhood of *Simla* during the winter, retiring again as the weather becomes hotter.

There is another kind of bear among the snowy regions of a dirty sandy color. I once saw a tame one, but foolishly made no note on it.

The natives draw a strong line between the two, and say that the black bear lives on fruits and roots, while the sandy bear eats flesh.

GERARD mentions having seen the latter and says the two are identical.

[A note received while this is in the press adds to the above list of birds and animals found in the *Simla* hills some others known from Mr. HODGSON's Nepal collection:—the "*Surrow*" or *Eimoo:* the *Martis flavigula* in pairs, decidedly plantigrade—the *Lynchus erythrotis*, HODG. Also a weasel found in villages, like *Mustela vulgaris*. We have not space for particulars.—ED.]

NOTE.—For the altitudes of the different places mentioned I am indebted to the kindness of Captain P. GERARD, residing at *Simla*.

[We take the opportunity of appending to Lieut. HUTTON's paper a table of barometric heights taken in a trip to the *Burenda pass* by Mr. E. C. RAVENSHAW, C. S. in 1829, which has been some time in our possession.—ED.]

				Baro.	*Th.att.*	*det.*		*Feet.*
May, 18	6½	P. M.	Bridge at the Jumna, ...	27.71	70	67 =	about	2193*
19	11	A. M.	Tents at Nagthi, ...	24.12	74	70 =	..	5795
20	4	P. M.	Mukti, ...	23.984	69½	71 =	..	5805
21	7½	A. M.	Thanna Túngra,.....	23.040	66	60 =	..	6851
22	10	A. M.	Tents on Deobun, ...	21.932	62	63	..	7947
24	6	P. M.	Búndroulí,.....	24.65	70	67	..	5253

* N. B. In this rough calculation of the heights after deducting .003 of an inch for every degree of heat above 32° in the attd. thermometer, I have allowed 1000 feet for every degree of the barometer below 29.789, (which from the No. 34 of GLEANINGS OF SCIENCE appears to be the average height of the barometer at the sea, taken the height of Calcutta at 25 feet as estimated in Lieut. BARNES' letter in the same No.) In NICHOLSONS' or the Edinburgh Encyclopædia only 900 feet are allowed

				Baro.	*Th.*	*att. det.*		*Feet.*
25	Noon	at Dhargadh stream, ...		26.69	74	74	..	3265
	7	P. M. Kandhú, ...		25.28	66	64	..	4611
26	7	A. M. At the Jhúla over the Tonse,		27.023	60	60	..	2850
27	10	A. M. Earí on the Pabbar, ...		26.17	77½	77	.. *	3754
28	10	A. M. Temple at Hath,.....		25.35	84	77	.. †	4595
29	10	A. M. Rúrú,.....		24.97	75	72	.. ‡	4948
30	10	A. M. Sérgaon, ...		24.22	80	76	..	5713
31	4	P. M. Pèka,.....		22.15	59	58	..	7720
June 1	8	A. M. Janglíg,.....		21.568	64	58	..	8221
2	3	P. M. Lití, ...		19.62	52	50	..	10229
3	9¾	A. M. Crest of the Búran Ghât or Burenda Pass,.....		17.211	56	43	..	12650

II.—*Discovery of the Rekhá Ganita, a translation of the Elements of Euclid into Sanskrit by* SAMRÁT JAGANNÁTHA, *under the orders of Rája* SIWÁI JAYA SINHA *of Jaipur. By* LANCELOT WILKINSON, *Esq. C. S. Resident at Bhopál*§.

I lately had the good fortune to procure a copy of the *Rekhá Ganita* or Sanskrit version of Euclid's Elements, which was made by the order of SEWÁI JAYA SINGH rája of *Jaipur*. This chief, the flower of the Hindu princes of Hindustan, ascended the *gaddi* of *Jaipur* in A. D. 1699, and died after a reign of 44 years in A. D. 1743. He was distinguished by an ardent passion for the study of mathematics and especially of astronomy, and he did more to promote the cultivation of sound science in this benighted land than any other Hindu prince on record. Some details of his astronomical labours have been published to the European world by the late ingenious Dr. HUNTER in his

to a barometrical degree or inch, but as other modes of calculation adopted by GRAHAM give more, I have assumed 1000 feet as a fair standard. With this liberal allowance however the *Burenda Pass* instead of being upwards of 15,000 feet appears to be only 12,650.

* The spot where the observation was taken being about 20 feet above the water and distance between the *Jhúla* and *Earí*, about 12 inches, 3754 — 2830 = 924 ÷ 12 = 77 feet per mile.

† *Hath* being 50 feet above water and distance from *Earí* 14 miles, 4545 — 3754 = 791 ÷ 14 = 57½ per mile.

‡ *Rúrú* ditto and dist. from *Hath* 8 miles, 4898 — 4545 = 353 ÷ 8 = 44 per mile.

N. B. Observed at *Earí* in the evening that the water in *Pabbar* had fallen about 2½ inches since day break. Hove the log in shape of a tent peg, but the rapidity of stream did not prove more than 3 miles per hour, at *Shèrgaon*, *Píka*, *Janglig*, *Líti*. Rain every day about 4 o'clock. Snowy mountains clear in the morning but invariably clouded at noon.

§ We insert this notice with pleasure because it may excite attention to the work; but the Rekhá Ganita is not unknown here.—A copy exists in the Sanskrit College, which with a Sanskrit commentary was at Prof. WILSON's suggestion to have been printed; but the *suspension order* put it on the shelf!—ED.

papers in the Researches of your Society and by Colonel Tod in his annals of *Rájputáná*. As a legislator and statesman also he was equally distinguished. His name throughout *Rájputáná* and also in *Málwá* is to this day held in the highest veneration by all classes of the Hindu population. The *Márwári Saukárs* hold it as an article of faith that good fortune will attend their dealings if they take the name of Jaya Singh along with that of their gods in their morning orisons.

2. I do myself the honor of forwarding to you a few pages of the Sanskrit work above mentioned containing a prefatory introduction by the translator, the definitions, and a few propositions. I hope that you will be able to find room for it in your valuable and wide-spread Journal. At a time when the friends of education are anxiously busying themselves in collecting vocabularies of scientific terms in Hindí, the publication of even this specimen will not fail to be eminently useful to them; it will afford them the best means of at once enlarging and improving their previous collections of those terms in use amongst Hindu mathematicians of the present day.

3. The preface from its historical allusions has an interest of its own. Of it I have therefore added an English translation. From this, it appears, that the translator was Samrát Jagannátha a brahman, probably the author of the *Samrát Siddhánta* a treatise on astronomy generally attributed to Jaya Singh himself.

4. Dr. Hunter mentions that Jaya Sinha had treatises on plane and spherical trigonometry also translated into Sanskrit. But I have not as yet succeeded in procuring either them, or the *Samrát Siddhánta*. My search however has been of but recent date, and I have still hopes that it will not prove fruitless.

5. The copy of the *Rekhá Ganita* I procured from a Rájput of *Oujein* named Kulian Singh at present in my service, who formerly held jágire from Sindia and Holkár, whom he served in the capacity of astrologer and astronomer, and mathematical instrument maker. It contains 14 books complete, and a part of the 15th book; but the diagrams illustrative of the several propositions have unfortunately been entirely omitted. The work of supplying them and the letters with correctness so as to coincide with the explanations in the text, will be a tedious, and in some instances a difficult task.

6. Rája Jaya Singh, in his *Tij Muhammad Sháhi* addressing his work to the learned and well informed Musalmán public, did not venture even to attempt to conceal from it, the obligations under which he was well known to be to the learned Europeans and Muhammadans in his service. Our brahman translator of this work, however is guilty of one of those base acts of plagiarism and literary injustice so

common with all Hindu authors. He coolly informs his readers that the work was originally revealed by BRAHMA to VISWAKARMA; and to himself he attributes the honor and credit of restoring and reviving its revelations, which he says had in the course of ages been lost or forgotten. His object in so doing may perhaps have been rather a desire to secure its acceptance with his countrymen*, than a hope of advancing his own reputation. For at a time when the minds of the whole Hindu nation were burning with a sense of indignation at the ruthless persecutions and oppressions of the wily, bigotted and hypocritical AURANGZE'B and his Muhammadan advisers, he may have apprehended the total rejection by all men of his faith of any thing however valuable professedly borrowed from the Musalmáns and their Yunáni teachers. The fact of his hazarding a discovery of the theft, however bears ample internal evidence to the gross ignorance of even all his educated countrymen at this time.

7. The allusion in the 3rd verse to the protection afforded to the learned expatriated brahmans of *Vrindávan*, probably refers to the oppressive persecutions inflicted on the city and brahmans of *Mathurá* by AURANGZE'B, by whose orders many temples and the valuable libraries they contained, were destroyed.

8. The allusion in the 4th verse to the courageous labours of rája JAYA SINGH, in removing "the people-grinding impost," probably refers to the obnoxious *jaziyá* imposed by AURANGZE'B. The honor of procuring its abolition he attributes to his master JAYA SINGH. Colonel TOD has given to ráná RÁJ SINGH the credit of having written that most eloquent, and elegant, and spirited letter of remonstrance against this impost, which has been so admirably translated by Sir W. B. ROUSE, and which is attributed by ORME to JESWANT SINGH of *Márwár*. I have seen nothing in the Persian language of which I would more desire the honor of being the author than of his remonstrance; and if we consult the internal evidence, to what Hindu prince could we with so much propriety attribute the noble sentiments it breathes, as to the enlightened chief of *Jaipur*? To him as well as to JESWANT SINGH I have heard it attributed. Colonel TOD in his partial zeal for the Rájpúts in attributing it to RÁJ SINGH would have us regard it as a proof of the enlightenment of his favorite *Ránáwats* of *Udipura*. But if it must be given either to ráná RÁJ SINGH or JESWANT SINGH of *Márwár*, then to their enlightened Musalmán munshis alone can be accorded the credit of the actual composition; for we have no reason whatever

* Had he wished for concealment, he would not surely have retained the Persian order in the letters of the diagrams (see Pl. L.)—ED.

to know that either of these princes were themselves in any degree advanced beyond that state of semibarbarism which then and still distinguishes all tribes of Rájputs.

Translation of the Preface.

Salutation to GANESHA; salutation to LAKSHMI' and NRISINHA. Upon GANESHA, who is worshipped by the gods, and fulfils all the prayers of men; who is adorned with all power, and who removes all difficulties, I devoutly call.

2. I humbly prostrate myself at the lotus feet of LAKSHMI' and of NRISINHA, which are adored even by the gods, and the fragrant dust of which is revered by all mankind. I bow in reverence to SARASWATI the destroyer of the darkness of infatuated ignorance, and to my instructor who is distinguished in the science of mathematics.

3. May the illustrious king of kings rája JAYA SINHA, who pure in heart by his own prowess and without dread brought SRI' GOVINDA and the other learned men who had fled from *Vrindávan* and settled them (in his own neighbourhood), and who has by his own force reduced to obedience *Mlechchha* chiefs of distinguished rank,—rule long over this portion of the earth.

4. He shines conspicuous by his glorious power, by which he has removed the tax under which the people were grievously oppressed; he is terrible to his enemies and like the sun in the hot season, not to be endured by them.

5. He performed the *Wujápaya* and other sacrifices, and celebrated also the 16 *Mahádán*, bestowing on the most distinguished brahmans, cows and villages, elephants and horses.

6. For the pleasure of this most illustrious king SRI' JAYA SINHA, the brahman SAMRAT JAGANNA'THA composes this most excellent work called the "*Rekha Ganita*" or geometry.

7. It is a novel and unequalled science, in as much as it teaches from a knowledge of angles clearly to ascertain the measurements of different figures.

8. This treatise on geometry (or mechanics *Shilpashastra*) was originally revealed by BRAHMA to VISHWAKARMA from whom it descended to this earth, and has been handed down from generation to generation.

9. But being lost in the course of time, I, by the commands of the Mahárája JAYA SINHA, have again published it to the world, for the delight of all mathematicians.

The *Rekha Ganita* contains 15 books and 478 propositions. In the first book are 48 propositions.

Definitions or EXPLANATION of the terms used.

1. A point is that which is visible to the eye, but is incapable of subdivision.

2. A line is long—but is without breadth: it may be divided.

3. A superficies has both length and breadth.

4. There are two kinds of superficies, the one plane as the smooth surface of levelled water, the other not plane.

5. Lines are also of two kinds, straight and curved (or crooked), &c. &c.

Original Text.

श्रीगणेशाय नमः ॥ श्रीलक्ष्मीनृसिंहाय नमः ॥ गणाधिपं सुरार्चितं समस्तकामदं नृणां प्रशस्तभूतिभूषितं स्मरामि विघ्नवारणं ॥ १ ॥ लक्ष्मी नृसिंहचरणांबुरुहं सुरैर्वन्द्यं समस्तजनसेवितरेणुगन्धं वाग्देवतां निखिलमोहतमोपहन्त्रीं वन्दे गुरुं गणितशास्त्रविशारदञ्च ॥ २ ॥ श्री गोविन्दसमाज्ञयादिविबुधान्वृन्दाटवीं निर्गतान् यस्तत्रैव निराकुलं शुचिमनोभावः स्वशक्त्यानयत् स्लेक्षान्मानसमुन्नतान्खतरसा निर्जित्य भूमंडले जीयाच्छ्रीजयसिंहदेवनृपतिः श्रीराजराजेश्वरः ॥ ३ ॥ करं च नार्दनं नाम दूरीकृत्य स्वतेजसा भाजते दुःसहेऽरीणां यथाग्नेयो दिवाकरः ॥ ४ ॥ येनेष्टं वाजपेयाद्यैर्महादानानि षोड़श दत्तानि द्विजवर्येभ्यो गोग्रामगजवाजिनः ॥ ५ ॥ तस्य श्रीजयसिंहस्य तुष्ट्यै रचयति स्फुटं द्विजःसम्राट् जगन्नाथो रेखागणितमुत्तमं ॥ ६ ॥ अपूर्वं विहितं शास्त्रं यत्र कोशावबोधनात् क्षेत्रेषु जायते सम्यक् व्युत्पत्तिर्गणिते तथा ॥ ७ ॥ शिल्पशास्त्रमिदं प्रोक्तं ब्रह्मणा विश्वकर्मणे पारंपर्यवशादेतदागतं धरणीतले ॥ ८ ॥ तदुच्छिन्नं महाराज जयसिंहाज्ञया पुनः प्रकाशितं मया सम्यक् गणकानन्दहेतवे ॥ ९ ॥ अथ रेखागणितं प्रारभ्यते अत्र ग्रन्थे पञ्चदशाध्यायाः सन्ति अष्टसप्तत्युत्तरचतुःशतं श्लोकानि सन्ति तत्र प्रथमाध्याये षट्चत्वारिंशच्छ्लोकानि सन्ति तत्रादौ परिभाषा यःपदार्थः दृग्ज्ञानयोग्यः विभागानर्हः स बिन्दुर्वाच्यः यःपदार्थः दीर्घैविस्तारैरहितः विभागार्हः स रेखाशब्दवाच्यः विस्तारदैर्घ्ययोर्यद्विद्यते तद्धरातलं तदेव क्षेत्रं तद्द्विविधं एकं जलवत्समं द्वितीयं विषमं अथ रेखापि द्विविधा एका सरला अन्या वक्रा अथ सरलरेखालक्षणं यस्यां न्यस्ताः बिन्दवः अवलोकिताः सन्तः एक बिन्दुना छाद्यन्ते सा सरला अन्यथा कुटिला धरातलमपि समं विषमञ्च ज्ञेयं समं यथा यत्र बिन्दुं लिखित्वा सूत्रं निःसारयेत् तद्यदि सर्वत्र

लम्बं भवति तदा धरातलं समं ज्ञेयं अन्यथा विषमं अथ कोणलक्षणं धरातले रेखाद्वययोगात् या सूची उत्पद्यते स कोणः सच द्विविधः सम कोणोविषमकोणश्च समानरेखायां लम्बयोगादुत्पन्नौ कोणौप्रत्येकं सम कोणौ भवतः रेखे मिथः लम्बरूपे न भवतः तच समकोणान्न्यूनः अल्प कोणो भवति समकोणादधिकोऽधिककोणोभवति समातिरिक्तो विष मकोणोभवति समकोणस्तु सरलरेखाभ्यामेव भवति (1*) विषमकोणः सरलरेखाभ्यां सरलकुटिलरेखाभ्यां कुटिलरेखाभ्यां च भवति (2) (3) अथ क्षेत्रलक्षणं धरातलं रेखया रेखाभ्यां रेखाभिर्वावृत्तं क्षेत्रसंज्ञं मुच्यते वृत्तकोदंडत्रसचतुरस्रादिभेदेन बहुविधं ज्ञेयं अथ वृत्तलक्षणं समधरातलंविन्दु कृत्वा तस्मात्समानि सूत्राणि सर्व्वतः कृत्वा तस्मादेव विन्दुतः सर्व्वाणि सूत्राणि या स्पृशति कुटिला रेखा तद्वृत्तंज्ञेयं तदाक्रांतं धरातलं वृत्तक्षेत्रं भवति मध्यविन्दुः केन्द्रसंज्ञः केन्द्रोपरिगतं सूत्रं उभ यतः पालिसंलग्नं व्याससंज्ञं भवति व्याससूत्रं वृत्तक्षेत्रस्य समानं भागद्वयं करोति या रेखा केंद्रगा न भवति पालिसंलग्ना स्यात्तदुभयतः खंडद्वयं विषमं भवति सा रेखा चापकर्णसंज्ञा पूर्णव्यासंज्ञाच भवति (4) अथ सरलरेखावृत्तानि क्षेत्राण्युच्यन्ते तत्रादौत्रिभुजमुच्यते तत्त्रिविधं (5) एकं समत्रिबाहुकं द्वितीयं समद्विबाहुकं तृतीयं विषमत्रिबाहुकं पुनस्तत्रो क्तैरपि त्रिविधंत्रिभुजं भवति यस्मिन्नेकः समकोणः अन्यौन्यू (6) नको णा तत्त्रिभुजं समकोणत्रिभुजंज्ञेयं यत्र एकः अधिककोणः अन्यौ न्यून कोणौ तदधिककोणं त्रिभुजंज्ञेयं यस्य त्रयोऽपि न्यूनकोणाः तन्न्यूनकोणं भवेत् अथ चतुर्भुजं यस्य बाहुचतुष्टयं समानं अथच कोण (7) चतु ष्टयमपि समानं तच्चतुरस्रं समकोणं समचतुर्भुजं ज्ञेयं यस्य (8) कोणच तुष्टयं समानं अथच सन्मुखबाहुद्वयं मिथःसमानंतद्विषमचतुर्भुजं आयतक्षेत्रं ज्ञेयं यस्य कोणचतुष्टयं विषमं भुजचतुष्टयं समंतद्विषमकोणं समचतुर्भुजंज्ञेयं (9) यस्य कोणचतुष्टयं विषमं भुजचतुष्टयञ्च विषमं

* The figures have reference to the diagrams in plate L.

तद्विषमकोणविषमचतुर्भुजं क्षेयं (10) अथ समानान्तराग्ररेखा लक्षणं या रेखा प्रथमनिःसारितरेखया कदापि न मिलति सा समानां तराला रेखा भवति (11) यावन्तः समकोणाः ते सर्वे समानाः अथ सरलरेखाद्वयं धरातलं व्याप्तुं नशक्नोति (12) कुटिलं रेखाद्वयं (13) अथवा कुटिलसरलरेखाद्वयं धरातलं आवृणोति यत् (14) रेखाद्वयं समानान्तरं न(15) भवति किन्तु विषमान्तरं भवति (16) तच्च यस्मिन् प्रदेशे बृहत्तरं भवति (17) तद्दिशि वर्द्धितयोरेखयोरंतरमुत्तरोत्तर अल्पमेव भवति यावद्रेखासंयोगं तदनन्तरमंतरंवर्द्धिष्णुर्भवति यत्र कोणशब्दः तत्र सरलरेखाक्रांतएव कोणोज्ञेयः यत्र रेखाशब्दस्तत्र सरलैव रेखा ज्ञेया यत्रभूमितलशब्दः तत्र जलसमीक्षतमेव भूतलं ज्ञेयं इतिपरिभाषा अथ प्रथमक्षेत्रं यदासमत्रिभुजं क्षेत्रं कर्त्तव्यं भवति (18) तत्र अवरेखा ज्ञातास्ति तदुपरि त्रिभुजं क्रियते तद्यथा (19) अर्द्धेन्द्रं कृत्वा अवव्यासार्द्धेन वृत्तं कार्यं एवं बर्केन्द्रंकृत्वा ब अव्यासार्द्धेन वृत्तंकार्यं यत्र वृत्तद्वयसंपातः तत्र जचिह्नं कार्यं तत्र अजरेखा बजरेखा कार्या अबजत्रिभुजं जातं समानत्रिभुजंकुतःअवरेखा अजरेखा समा नास्ति यतः बजंवृत्तस्य व्यासार्द्धमस्ति पुनःबजरेखा अवरेखा समानास्ति कुतः अजवृत्तस्य व्यासार्द्धत्वात् बजंअजं समानंजातं अवतुल्यत्वात् तस्मा द्बजरेखात्रयंमिथः समानंजातं अथ द्वितीयंक्षेत्रं अभीष्टा रेखा कृतास्ति तदन्यत्रकृतबिन्दुतः तत्तुल्या रेखा कर्त्तव्यास्ति तत्रबिन्दुचिह्नं कल्पितं रेखाबजं यचिह्नाद्बचिह्नपर्यन्तंरेखाकार्या अवरेखोपरिसमत्रिभुजं अव दंकार्यं बर्केन्द्रबंबजेन वृत्तंजभवसंज्ञं कार्यं दबरेखा दीर्घावृत्तपालिमिलिता भासंज्ञा कार्या दभेनदर्केन्द्रंकृत्वाभवृत्तंकार्यं दअरेखा दीर्घावृत्तपालि इसंज्ञा कार्या त (20) त्र अइरेखा बजरेखा या समाना जाताः कुतः दइरेखा दभरेखा समानास्ति दअरेखा दबरेखा समाना तस्मात् अइ रेखाबभरेखा समानाजाता बभरेखा बजरेखा समाना तस्मात् अइरेखा बजरेखा समाना जातास्तीतिसिद्धं अथ तृतीयं क्षेत्रं इ यत्र वृहद्रेखा अबरेखाश्च ज्ञातास्ति तत्र अबरेखातुल्यं खंडं वृहद्रेखातः भिन्नंकर्त्तव्य

मस्ति तदा वृहद्रेखा अवसंज्ञा लघुरेखा जसंज्ञा कल्पिता अचिह्नात् अद
रेखा जसमानानिष्काग्रनीया पूर्व्वोक्तप्रकारेण पुनः अं केंद्रं कृत्वाअदेन
दृहभवृत्तंकार्यं इदंअबरेखातः अभ्ररेखां (21) अदरखासमानांएथक्
करोति तस्मात् अभ्ररेखा जरेखा समानाजाता अथ चतुर्थप्रकल्पं ४
यत्र त्रिभुजद्वयमस्ति तत्रैकत्रिभुजस्य भुजद्वयं तदन्तरगतकोणश्च द्वितीय
त्रिभुजस्य भुजद्वयेन तदन्तरगतकोणेनच समानं यदि भवति तदाप्रथम
त्रिभुजस्य शेषकोणद्वयं तृतीयभुजश्च द्वितीयत्रिभुजस्य कोणाभ्यां तृतीय
भुजेनच समानंभवति क्षेत्रंप्रथमत्रिभुजं अबजंद्वितीयत्रिभुजं दृहभं
अबंदहंसमंअजंदभंसमं अकोणदकोणौ समानौ कल्पितौ तदाबजंदृहभं
समं भविष्यति बकोणहकोणौ समानौजको (22) अभकोणौ समानौ
भविष्यतः क्षेत्रंक्षेत्रं समानं भविष्यति अत्रोपपत्तिः बअरेखां दहरेखा
यांन्यसेत् अकोणं दकोणे न्यसेत् अजंदभोपरिन्यसेत् अजंदभोपरिन्य
सेत् एवंकृते बजंदभोपरिस्थास्यति यतःरेखाद्वयंसरलमस्ति बजकोणौ
दभकोणयोः स्थास्यतः क्षेत्रंक्षेत्रं समानं भविष्यति अथ पञ्चमक्षेत्रं ५
यस्य त्रिभुजस्य भुजद्वयं समानं (23) तस्य तृतीयभुजोपरिसंलग्नंको
णद्वयं समानं भवति भुजद्वयं स्वमार्गवृद्धंसत् तृतीयभुजाधःसमुत्पन्न
कोणद्वयमपि समानंभवति यथा अबजत्रिभुजे अबंअजं समानमस्ति
तदा अजबकोण अबजकोणौ समानौ भविष्यतः पुनःअबरेखा वर्द्धनीया
दयर्थंतं दयर्थंतं अजरेखा वर्द्धिता ततःसमुत्पन्नौ बजहकोण जबदकोणौ
बजरेखाधःस्थितौ समानौभवतः अत्रोपपत्तिः बदरेखायांभचिह्नं कुर्यात्
अहरेखायांबदरेखाः समानाः जबरेखा पृथक्कार्या बदरेखाजभरेखा
च कार्या अजभत्रिभुजे अबदत्रिभुजे अबभुजः अभभुजः अकोणःबअ
भुजेन अदभुजेन अकोणेन क्रमेणसमानः अभभुजबदभुजः एतौसमानौ
जातौ अजभकोण अबदकोणौ समानौ भकोणबदकोणौ समानौ जातौ
अजभकोणअबदकोणौ समानौ भकोणबदकोणौ समानौजातौ जबभ
त्रिभुजेबअदत्रिभुजेच बभभुजः भजभुजः भकोणः जबभजेनबदभुजेन
बकोणौ तसमानौस्तः तदाजबभकोणः बजकोणः इमौद्वौसमानौ जातौ

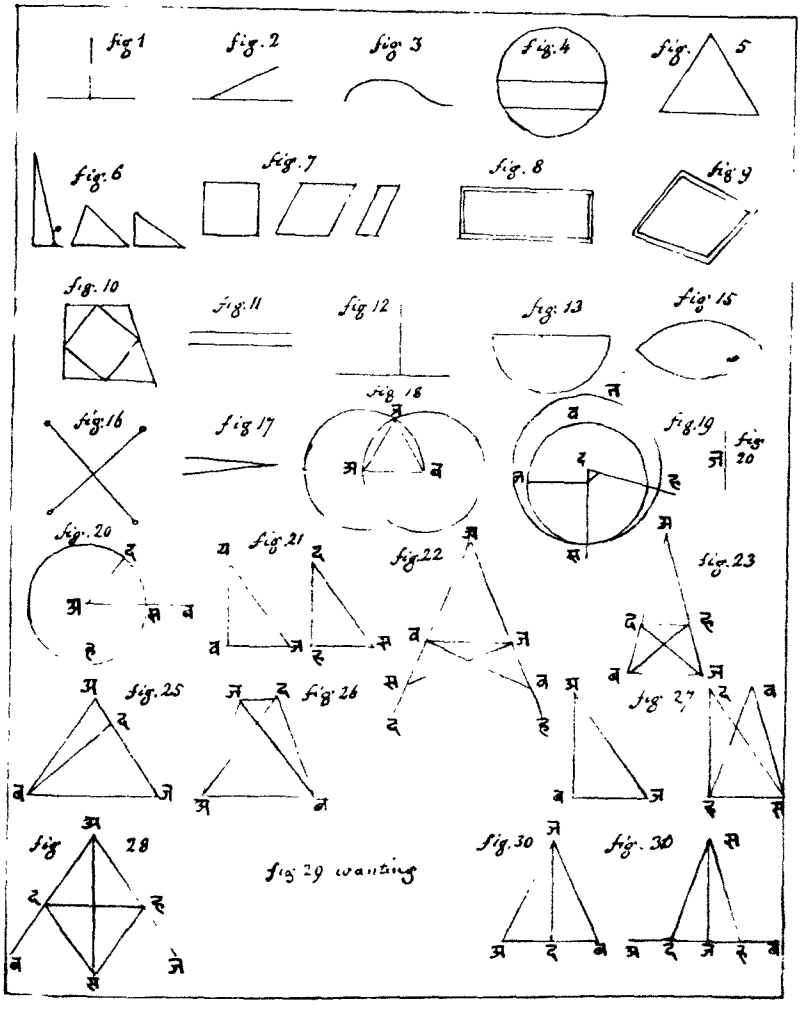
भुजबकोटिः बवजकोटिः समौसमानौजातौ एतौ अजभुकोटि अबवकोटि योः योधितायोषौ अजब अबजकोटौ समानौ भवतः इदमेवाव्यक्तमिश्रं प्रकारांतरेण पञ्चमक्षेत्रं ५ अबरेखायां द चिह्नंकाय अदरेखा तुल्या बहरेखा भिन्ना कार्या दहरेखा दजरेखा हबरेखाच कार्या अदज त्रिभुजेदबभुजः अजभुजः अकोटिः अहब त्रिभुजस्येन हबभुजेनब अभुजेन अकोटेन क्रमेण समानः बहरेखा दजरेखा परस्परं समाना जाता अबहकोटिः अजदकोटिश्च एतौसमानौ जातौ बदह त्रिभुजेदबभुजःबह भुजः दबहकोटिः दहजत्रिभुजस्य जहभुजेन जदभुजेन हजदकोटेन समानः बदहकोटि जहदकोटौ परस्परं समानौ बदहकोटिः जहदकोटि, परस्परं स (24) मानः बदजकोटिः बहजकोटिश्चैतौ समानौ बदजत्रिभुजे बदभुजः दजभुजः बदजकोटिः बहजत्रिभुजस्य जहभुजेन हबभुजेन जहबकोटेनच समानः अजबकोटौ (25) समानौजातौ तदेवमभीष्टौ कोटौसिद्धौ अथषष्ठंक्षेत्रं ६ यस्य त्रिभुजस्यकोटिद्वयं समानंतत्कोटिसंबन्धि भुजद्वयमपि समानंभवति अत्रोपपत्तिः अबजत्रिभुजे बजकोटौ समानौ अबं अजमपि समानं यदिभुजद्वयं समानं न भवति एकःभुज अधिकःस्यात् तदाअधिकभुजः अजकल्पितः बअसमानंजदंभिन्नं ज्ञात्वा बदरेखा कार्या अजबत्रिभुजे अबभुजः बजभुजः अबजकोटिः दबजत्रिभुजस्य दजभुजेन जबभुजेन दजबकोटेन समानः बृहत्त्रिभुजं लघुत्रिभुजं समानंजातं तदिदमनुपपन्नं बृहत्क्षेत्रं लघुक्षेत्रेण कथं समानं भविष्यति तस्मादजं अबं समानं तदेवमुपपन्नं कोटिद्वयसाम्येन तत्संबन्धिभुजद्वयसाम्यमपि भवति अथसप्तमक्षेत्रं ७ तत्रैकरेखोभयपार्श्वयोः रेखाद्वयं निःसृतं यत्र मिलितं तच्चिह्नादन्यत्र तद्रेखाद्वयमिलनंभवति अत्रोपपत्तिः (26) अबरेखाप्रान्तादन्याजरेखा बजरेखाच निःसृता जचिह्ने तयोर्योगो जात. अथ यदि तत्समानं अन्यद्रेखाद्वयं अन्यत्र चिह्नेमिलति इतिकल्प्यते तदा अजरेखा तुल्या अदरेखा बजरेखा तुल्याबदरेखादचिह्ने मिलिता स्यात् पुनर्दजरेखा निष्काशातदा अजदकोटिः अदजकोटेनसमानःस्यात् कुतःअज अदसमानात् यत् बजद

कोणः अजदकोणादल्पोऽस्ति बजदकोणः अदजकोणादल्पोभविष्यति पुनःअदजकोणः बदजकोणादल्पोऽस्ति बजद कोणः बदज कोणादत्यंत अल्पःस्यात् इमौतु समानौस्तः कुतःबदबजभुजयोः साम्यात् तस्मादि दमनुपपन्नंयतः समानौकोणौ विषमौजातौ तदेवमुपपन्नंजचिक्रादन्यत्र भुजयोगो भविष्यतीति अथाष्टमक्षेत्रं च यस्य त्रिभुजस्य भुजत्रयं अन्यत्रिभुजस्य भुजैःसमानं भवति तदा तस्य कोणत्रयमपि अन्यत्रिभुज कोणैरवश्यंसमानं भविष्यति (27) तत्रैकंत्रिभुजं अबजं द्वितीयं दहझ कल्पितं अत्र अबदहभुजः समानःअजभुजः दझभुजेन समानः बजभुजः हझेन समानः कल्पितः यदाभुजत्रयं समानंजातं तदा अकोणः झको णेन समानः बकोणः हकोणेन समानः जकोणः झकोणेन समानो भविष्यति कुतःयतः बजभुजं हझभुजे स्थाप्यते क्षेत्रं क्षेत्रे स्थाप्यते शेषौ अबअजौ भुजौ दहदझभुजयोः स्थास्यतः यदिनस्थास्यतः तदभिन्नौ ति ष्ठतः यथा बहबझौ कल्पितौ तत्रेयमनुपपत्तिः दहदझरेखे हझरेखा उभ यप्रांताभ्यां निःसृते दचिह्ने मिलिते बहबझरेखे पूर्व्वरेखा समाने प्रांताभ्यां निःसृते वचिह्नेमिलिते इदमनुपपन्नं इदं सप्तमक्षेत्रेप्रतिपादितमस्ति तस्मात्त्रिभुजं त्रिभुजोपरि स्थास्त्येव कोणाश्चापि कोणसमाना भवंत्येव तदेवमुपपन्नंयथोक्तं अथ नवमक्षेत्रं ९ तत्रकोणस्य समानभागद्वयकरणं प्रदर्श्यते तद्यथा बअजकोणः अत्रकल्पनीयः बअ(28) भुजे द चिह्नं कृतंतत् तुल्यमेव द्वितीयेपि भुजे ह चिह्नं कार्यं दहरेखा कार्या दहरेखोपरिदझसं समत्रिभुजंकार्यं अझरेखाकार्या इयंरेखाअकोणस्य समंभागद्वयं करोति यतःदअझत्रिभुजे हअझत्रिभुजे दअझभुजः हअझभुजश्च मिथःसमानः दझभुजहझभुजौ समानौ अझंउभयोरेकरूपत्वात् उभयोस्त्रिभुजयोर्भु जाः समानाः कोणाश्चापि समानाभवंति तस्मात्झअदकोण झअहकोणा समानौ जातौ तदेवमुपपन्नं यथोक्तं यदि झचिह्नं रेखयोरन्तर्गतं प्रदेशम ध्येभवति रेखोपरिवा रेखायाः बहिर्नभवेत् तदैवमुपपत्तिरुपपन्ना भवि ष्यति अथझचिह्नंरेखयोरंतरप्रदेशमध्ये अवश्यं भविष्यति कुतःयदिमध्ये न भविष्यति तदा रेखायां बहिर्वा भविष्यति तदैतादृशं क्षेत्रंस्यात्तद्

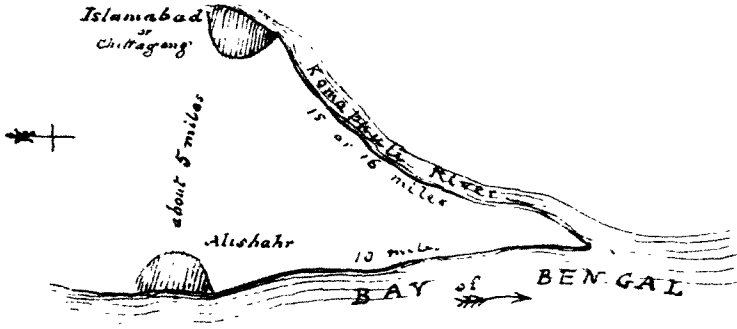
ग्रंनं तत्र भदहकोणौ समानौ भविष्यतः जदहकोणः बदहकोणेन समभ चिक्रं यदिबदभुजे पतति तदा दहजवृहत्कोणः दहजवृहत्कोणखंडञ्च इमौ समानौ जातौ इदमनुपपन्नं यदिभाचिक्रं बदभुजादहिर्भविष्यति तदा भादहकोणः बदहकोणान्महान् भविष्यति दहजकोणादपि भविष्यति यतः बदहकोणः दहजकोणश्च इमौ समौ स्तः भादहमहान्कोणः दहभाकोणेन समोऽस्ति दहभाकोणखंडं दहजकोणान्महज्जातं तदिदमनुपपन्नं यतः खंडं कोणादधिकं न भविष्यतीति तस्मात्भाचिक्रं भुजयोर्मध्य एव भविष्यति पुनः प्रकारान्तरेण कोणस्यार्द्धीकरणं दबरेखायांभाचिक्रं कार्यं दभारेखा तुल्यं हबंदृग्वक्कार्यं भादृबदरेखे कार्ये संपातस्तसंज्ञः कार्यो यतरेखा कार्या इयं अकोणस्य समानं भागद्वयं करोति अत्रोपपत्तिः भादृद (29*) कोणः बदहकोणश्चैतौ समानौ जातौ दतंहतं समानं दच (*) तच्चिभुजं हृच्चतच्चिभुजं समानं तस्मात् अकोणस्य भागद्वयं समानं जातं अथदभमक्षेत्रं १० तत्रयरेखायाः समानं भाग इयमपेक्षितं भवति तदा तत्रेखोपरि समचिभुजं कार्यं यथा अबरेखोपरिसमं चिभुजं कृतमस्ति पुनस्तत्र अकोणस्य (30) अदरेखया समानं भागद्वयं कृत्वा तदाजरेखाअबरेखयाअपि समानं भागद्वयं करिष्यति अत्रोपपत्तिः अजदचिभुजे अजभुजः अदभुजः अजदकोणश्च दजबचिभुजस्थेन बजभुजेन अदभुजेन बजदकोणेनच समानःतस्मात् अदंबदंद्वयमपि समानं तदेवमुपपन्नं रेखया समानं भागद्वयं अथैकादशक्षेत्रं ११ तत्रैकरेखायां अभीष्टचिह्नाङ्कंबानिष्काश्यनीयोऽस्ति यथा अबरेखायांजचिह्नं दत्त्वा तस्माङ्कंबानिष्काशितोऽस्ति तद्यथा अजरेखा (31) यां दचिह्नंदेयं अदतुल्यं अहंकार्यं दहरेखायां समचिभुजं दभाहंकार्यं पुनः भाजरेखा कार्या इयमेव लम्बः अत्रोपपत्तिः दभाजचिभुजस्य भुजद्वयं हभाजस्य भुजैः समानमस्ति भाजदकोण भाजहकोणौ अचिह्नस्य समानौ तस्मात् अस्य द्वौकोणौ समकोणौ जातौ भाजरेखा लंबोजातः तदेवमुपपन्नं चिह्नाङ्कस्थकरणं पुनः प्रकारांतरेण तत्र अबरेखायां अचिह्नाङ्कस्थकरणं चिकीर्षितमस्ति तत्रयथा ॥

* These two figures are wanting; also No. 24.

FIGURES OF THE REKHA GANITA EXTRACT.



Position of the TIDE GAGE at Chittagong.



III.—*Observations of the Tides at Chittagong made in conformity with the Circular of the Asiatic Society. By Lieut* H. SIDDONS, *Engineers.*

Tide Registry.
Alishuhr Beach, July, 1837.
Times of High water.

[See sketch in Pl. L.]

Date.	1st Tide.	2d Tide.	Date.	1st Tide.	2d Tide.	Moon passes meridian.
1	● Passed	mern. S.	16	11h 06m	23h 63m	or 0 03 of the 17th.
2	0h 37m	13h 15m	17	11 58	0 57	
3	1 3	13 55	18	13 23	1 54	● 1d 23h 31.7m mean time.
4	1 51	14 25	19	14 19	2 45	○ 17 11 58.3
5	2 30	14 57	20	14 57	3 21	● 29 22 45.8
6	2 45	15 12	21	15 21	3 51	
7	3 03	15 35	22	16 27	4 31	
8	3 38	16 04	23	17 17	5 21	
9	4 03	16 43	24	17 51	6 51	
10	4 35	17 38	25	18 42	7 40	
11	6 03	18 48	26	19 43	8 49	
12	7 07	20 17	27	20 54	10 01	
13	8 10	21 10	28	22 11	10 59	
14	9 09	22 06	29	23 15	or a ¼	past 11 A. M. of the 30th.
15	10 03	23 07		Observations stopped by mistake a day too soon.		

All the above are expressed in mean time.

The second tide of the 16th should stand as the first of the 17th, and so on for the remainder.

October, 1837.

Mean Time. ☽ Meridional passage ● 29th Sept. 24h 09m 00s ○ 13th Oct. 11 35 06 ● 28th Oct. 23 31 45

1	2h	10m	14h	12m	There must have been a heavy gale somewhere from the				
2	2	41	14	46	4th to the 8th; the swell here was very great and the				
3	3	13	15	19	times noted so far doubtful on account of the waves.				
4	3	46	15	52	On Wednesday the 4th we had violent squalls of wind and				
5	4	17	16	24	rain; there was no barometer to note the fall, but the				
6	4	50	16	56	atmosphere felt remarkably heavy though chilly.				
7	5	26	17	28					
8	6	32	19	29					
9	9	38	21	40					
10	10	34	22	36					
11	11	44	23	49					
12	....		12	33					
13	0	31	13	19	On the 13th the diff. between day and night flood by Mr.				
14	1	14	14	0	C. W. Mullins was 9 inches, this at the Sudder ghat,				
15	1	47	14	22	Chittagong 12 miles up the river.				
16	2	23	14	53					
17	2	56	15	24	On the 22nd 3 inches,				} According nearly with my own.
18	3	28	15	56	23rd 2½ inches,				
19	3	48	16	02					
20	4	11	16	43	Rise of day Tide.			Diff. btwn. D. & night flds.	
21	4	49	17	28					These observations were all taken by
22	5	50	20	40	Ft.	in.	8th	Ft. in. 8th	me at Point Petunga, the mouth of
23	8	43	21	42	7	6	0	0 3 4	the Chittagong river, where I had
24	9	46	22	45	8	6	4	0 2 5	gone for change of (and sea) air.
25	10	48	23	35	9	7	7	0 7 1	
36	11	40	....		10	8	3	0 8 5	
27	0	20	12	25	11	9	3	0 9 0	———
28	0	50	12	52	12	10	7	0 9 5	
29	1	22	13	21	13	7	2	0 10 6	On the 29th there was a diff. between
30	1	48	13	50	13	2	0	1 6 2	the flood tide at Alishuhr and Point
31	2	05	14	15	13	2	0	1 8 3	Petunga at the mouth of the river
1	2	31	No	obs.	11	11	4	1 6 0	(about 12 miles south) of 15 minutes:
2	No	obs.	Ditto.		No	obs.		1 3 5	the other days were not noted.

IV.—*Translation of a Servitude-Bond granted by a Cultivator over his Family, and of a Deed of Sale of two slaves.* By D. Liston, *Esq. Gorakhpur.*

Some months ago I was requested by Captain Lawrence, under whose charge the survey of the Eastern Division of the district is placed, to furnish answers to statistical inquiries regarding *Sidowa Jobena*, a purguna of *Gorakhpur*, bounding on *Sarun*. I in turn thought of applying for aid in the compilation of the replies to a friend who has been settled as an indigo planter* for several years in *Sidowa*, and who proved to be possessed of a competent acquaintance with the habits and usages of the natives in his neighbourhood.

One of the queries put was, "How do zemindars pay people who water and cultivate lands for them?" The reply was to this effect: "They employ bond servants who are paid at half a cooly's rate, and are at the same time liable to fine in case of absenting themselves from their superior's work." Further inquiry procured me the accompanying bonds or deeds, and as they appear curious and valuable from throwing light on the condition of the agricultural population of this portion of India, I have translated them and now forward them to your address. If you regard them in the same light as I have done perhaps you may think it worth while to publish them in the journal; if you do not think them of sufficient importance for this purpose, pray dispose of them as you may think proper.

The deeds you will observe are blank, but still such as are daily executed and in full force; they were written out by a common village Putwarí, and are in the rustic dialect or *Patois* of the section of the province where he resides. The spelling you will also see is not ordered according to any very uniform system.

Servitude-Bond.

Translation.

Deed.—Abheeman Kooroomee and his children's plough bond for fifty-one rupees written, signed rupees fifty-one, 51.

[Place for the Master's name†.]

Writing.—Abheeman Kooroomee, inhabitant of *Futapoor*, perguna Sidowa Jobena Elaka Sooba Oudes zillah *Gorakhpur*, having received a loan of fifty-one (51) rupees from ‡ (the above mentioned individual), I have granted a bond agreeing to pay interest for the said rupees at eight anas

* Mr. J. Finch of *Bubnowlí*.

† Mr. Finch's name is set down in the original which it is hardly necessary to repeat is fictitious.

‡ Blank in original.

per month; for these same rupees I of my own will and accord execute (this) deed of *Hurwuheebundhee* (to have force) over my whole family, for the driving of a plough and for remaining always at hand to execute every kind of labour that may occur. If I remain absent a day from my plough or work then shall I be held responsible to the extent of a rutee weight of gold for each day's absence. If I go any where in the manner of flight then let my whole family be seized. If any other person give (me) a greater sum, he must pay at once principal and interest of this loan. That man may then take my family. If he do not give the money then may my family be seized without dispute; any other interfering will be in vain indeed. This is written that the first engagement may remain in force.

Written 29th Falgoon, year 1244 forty-four at *Emelia*.

DEED of SALE of two SLAVES.

Explanation and Translation.

DHODHO MAHTO *Kumkur* of his own will and accord sells AJUNSI'A and *Rupia*, having executed and delivered a "deed of sale of slaves" signed, or a *mofurkutee loonkutee*.

[I do not find the five or six first lines very intelligible but what follows presents no great difficulty].

The deed commences with the invocation, usual in Sanskrit documents, of *Sosti Sri*; the two first lines are taken up nearly with the enumeration of the titles of VIKRAMA'JIT and of SALIVA'HUN's power. In the fourth line the 43rd year of some king is indicated. ALUMGIR is then mentioned and the 32nd year of Nawáb Mírzá' Amani Beg spoken of. Then follows the year of the rule of the Honorable English Company; viz. the 33rd Mr. CURRIE being administrator, (local). The locality *Gorakhpur*, south of which runs the *Ganges* and to the north the *Gunduk*. The country *Bharuthkum*, sirkar *Gorakhpur*, sooba *Aoadh*, *Akternuggur*, perguna *Sedooa Jobena*, talooka *Bansgaon*, tuppah *Thadheebaree*. The 25th year (of the rule) of Babu Eshí Ku'mar Sah (talookdar), the 22nd year (since the establishment) of the English perguna. Sekh JUMALU'DIN being foujdar and tehsildar at the tehsildaree of *Peronna*.

In the village of *Buderuha* a sale of slaves was effected. Purchaser UDHO SINGH; amount 43 *Furukabad* rupees. Seller by name DHODHO MAHTO *Kumkur**, of his own will and accord he sells BULBHADER's wife† and son, two adults. The woman's name AJUNSIA, the lad's name RUPIA, (this) slavery-bond being executed and delivered. The woman's age 22‡, complexion fairish. RUPIA's age 28, complexion dark, eyes dark. Of these people DHODHO MAHTO *Kumkur* has completed the sale, wherever they go, thence they may be brought back, as slaves they are sold to perform every

* The *Kumkurs* are kuhars or bearers.

† A slave-holder may sell a whole family, or what part of it may suit is convenience.

‡ In the original the word is thirty, the ciphers twenty-two as here.

kind of work; wherever they may flee thence they may be seized and brought back without objection or complaint or murmur, without obstacle may they be brought from under the king's or prince's throne; whoever receives these servants, Hindu or Musalmán he may (legally) be adjured—the Hindu by the sacred cow;—the Musulmán by HUSEN, by the Sekh, Seyd, Mogul, Pytan, Sumbut year 1894, month Jet, dark half 13th day, Sunday, year 1244, place *Buderuha*, two ghurees of the day being spent, this was written and signed.

[We have not thought it necessary to insert a lithograph of the Deeds themselves which are in the ordinary *Kayasthí* or *Kaití* form of Nágari.—ED.]

V.—*Note on the Malay Woodpecker. By Dr.* WILLIAM BLAND, *Surgeon of H. M. S. Wolf.*

In reference to Mr. HODGSON's description of three new species of Woodpecker, in your Journal of February last, and agreeing in his opinion most heartily, that *America* cannot shew specimens of woodpeckers superior, nor even equal to those which are produced in India, allow me to send you for his information and others interested in the ornithology of this country, the description and measurement of a woodpecker, shot at the extreme point of the Malay peninsula, in March last. A specimen, to which even the royal Nipalese bird must yield the palm,—and a beautiful and noble bird it is,—in size, strength, and beauty, was preserved and sent to *Scotland;* but the following description is from my note book.

Body, not including bill nor tail, nine inches long, tail eight inches; bill, very strong and hard; ridges, high and sharp, forming at the tip a complete wedge; breadth at the base 9-10ths of an inch; height 6-10ths, being 1-3rd more in breadth than depth.

Color, back, breast, neck, wings, upper and under coverts of the tail, and tail itself, glossy black; belly and under wing coverts yellow; head crowned with a scarlet erectile crest, and a patch of red feathers behind the under mandible, with a few white speckles on the throat; tail moderately wedged, consisting of ten strong feathers, worn at the tips, and covered with the juices from trees on which the bird feeds; a bare space round the eye; iris bright yellow; tongue four inches long; feet large, strong, and zygodactile, with considerable mobility of the outer toe; spread of wings two feet three inches; weight twelve ounces. His loud tapping on a tree heard at a considerable distance, led to his discovery, and I had named him "*Picus Maximus Malayensis.*"

VI.—*Notes on the Musical Instruments and Agricultural and other Instruments of the Nepalese*. By* A. Campbell, *Esq. M. D. Surgeon attached to the Residency at Katmandhu.*

1.—Musical Instruments.

It is almost unnecessary to allude here to the two chief classes of men forming the population of the valley of *Nepal;* but to save repetition, it may not be amiss to mention, that the instruments underneath enumerated, are common to the Newars and the Parbuttiahs, both designations being understood in the widest sense. This difference, however, exists, in the classes of each tribe using them; among Parbuttiahs none but the lowest castes furnish professional musicians, and there are no amateurs of this science among the rude highlanders, who now rule *Nepal*. The Newars, on the contrary are, as a people, extremely fond of music, and many of the higher and middle castes practise it professionally, and indulge in it as amateurs. Their labors in the field are generally accompanied, and their weary return from it at certain seasons, enlivened by the plaintive strains of the rural flute *(bansuli)*, or the sharper tones of the *mohalli* (flageolet), and at marriages, births, feasts, fairs, and religious processions, a preceding band of music, is an indispensable portion of the smallest ceremony; nor is it uncommon, on a festival day (of which the Newars have nearly 100 annually) to see a joyous jolly fellow, with his flageolet, or cymbals, as the case may be, trudging along towards the scene of rejoicing, piping a national air on the former, for his own amusement and that of all passengers, or drumming with the latter, in unison to his thoughtless but cheering whistle.

As a general rule, however, professional musicians, among the Newars, as with the Parbuttiahs, are from among the lowest castes, *Kúllús* and *Kúsúlliahs*, form the majority from the former, *Damais* and *Sarkis* from the latter.

The instruments used by the people are as follows: I exclude the imitations by the Gorkhas, of British ones, with which their military bands are furnished, the chief of which are the *bagpipe*, made and played on by *Sarkis*. The flute, either English, or imitation of the flageolet, and a variety of horns, trumpets, and bugles.

No. 1.—*Phúnga* (*Newari*), is a trumpet-shaped instrument made of copper, about three and a half feet long, two inches in diameter as its large extremity, and tapering gradually to the mouth-piece, where its bore is diminished to the diameter of $\frac{1}{8}$th of an inch, it is formed of

* The figures refer to models presented by Dr. Campbell and deposited in the museum.—Ed.

three pieces, the one fitting into the other, is of very rude workmanship, and costs only about two Nepalese rupees*. The length of this instrument, and its slender make, require some support, when being used; it is consequently furnished with three pieces of stick, which when fitted into one another, form a rod of four feet in length to which the *Phúnga* is attached, by a bit of ribbon, at its expanded end, the rod crossing the instrument at right angles. The player holding the opposite end of the rod in his right hand elevates the instrument at pleasure, bringing it to the perpendicular when used in a crowd, but carrying it horizontally under other circumstances. The *Phúnga* belongs exclusively to the Newars, is called by them, "the musical instrument of the gods," and is played on at every religious ceremony and at every temple, within the valley, when the setting sun gives the signal for the performance of the evening sacrifice.

No. 2.—The *Mohalli* (*Newari*), or Nepalese flageolet. Is rudely executed, and from the most ordinary materials. Its mouthpiece is nothing more than a bit of palm leaf folded, and cut into a convenient shape! the body of the instrument is made of two pieces of sál wood, bound together by slips of the bambu, and hollowed out longitudinally, apertures or stops, (8 in number) being made for the fingers to play on; its trumpet or dilated extremity, is made of copper, gradually increasing in calibre, from the diameter of an inch to that of four inches at its open termination. The complete instrument costs about two and a half Nepalese rupees. The *mohalli* belongs exclusively to the Newars, and many persons of this tribe use it, who are not professional musicians. Its tones are sharper than those of the *bansuli*, or common Indian flute, and the national tunes adapted to it, are lively and pleasing, even to a British ear. To the Newars it seems to sound magically, for it has the power of inducing the poorest and most fatigued laborers, to join in the dance, and it is the constant accompaniment to their songs of merriment at feasts and weddings.

No. 3.—The *Singha*, or *Nar Singha*, the Nepalese horn. It is made entirely of copper, is when put together in the shape of a cow's horn, and about four feet long, is composed of four pieces, and tapers gradually from its wider extremity, where its calibre is four inches in diameter, to the mouth-piece, where the bore is not more than a quarter of an inch across. The *singha* is used exclusively by the lowest castes among the Parbuttiahs, and is in considerable demand among the lower castes of the plains of India. Its blast is loud, deep, but not musical, and its professors seem unable to mould its tones into

* A Nepalese rupee worth about 12 or 12¼ anas of Company's currency.

any thing like harmony. It is rudely manufactured, and costs about three and a half Nepalese rupees.

No. 4.—The *Nag-phéni*, or *Turi*, a Parbuttiah instrument exclusively. It is only different from the last in being of smaller size and having three vertical turns in its shaft, like a French-horn. Its *noise*, for music it scarce produces, is any thing but harmonious. It is made of sheet copper, tinned over, and costs one rupee eight anas.

No. 5.—The *Bansuli*, "or rural flute" of Sir W. Jones. It is much more like the common English fife in its tones, and is identical with it in form; is used by the Newars and Parbuttiahs.

No. 6.—The *Saringi*. This is the same as the instrument of that name used in India, and represents our European violin, in so far as it is stringed and scraped upon, with a horse-hair bow, but it is at best a miserable instrument. In *Nepal* it is only played on by the lowest caste Parbuttiahs, and by beggar boys, from among whom I have not seen or heard of any Pagamnis. The dancing girls imported from *Benares* annually for the amusement of the durbar, have their accompanying fiddlers; but these being foreigners, are not alluded to here.

No. 7.—The *Sitar*, or three-stringed guitar of India, is used by a very few persons in *Nepal*, whose proficiency is most wretched. Professors of this instrument from the plains of India find some encouragement from the Goorkhas,—at least an occasional performer of tolerable skill may be heard at their court.

No. 8.—Cymbals of various size, from that of a teacup, to the dimensions of a wash-hand basin, are used by the Newars and Parbuttiahs, to the same extent as in Hindustan; all religious ceremonies requiring music, all Jattras, or processions of the gods, as well as of marrying, and feasting mortals, are accompanied by the discordant noise of these untuned instruments. They are made of mixed metals, the chief of which is denominated *Phúlia*, and is composed of zinc, copper, and tin, in various proportions, according to the tone intended for the cymbal.

No. 9.—*Múrilli* of the Parbuttiahs, *Beaugh* of the Newars, is a small clarionet, about nine inches long, with eight stops, made of a single piece of bambu, the mouth-piece being formed by blocking up one end of the canal with a bit of wood, except a small slit through which the air is breathed. The tone of this instrument is sweet, and the airs played on it pleasing and plaintive. It costs about eight anas.

No. 10.—*Dhol* (drum). The same as the Hindustani one, except in the greater length of barrel, in one of the varieties.

No. 11.—*Dholuck*, differs from the *dhol* in having one end only covered with leather, and played on, is used by the Parbuttiahs but not commonly; a nearly similar drum, is used by the Newars, and called by them *dishi*.

No. 12.—*Beh* (*Newari*), commonly called *Krishna-beh*. Is the pastoral flute of that god (KRISHNA) so celebrated in history, and so famous in his loves,—is a common reed, with a spoon-shaped shield at the mouth stop: has seven stops along its shaft.

Specimens of these instruments were deposited in the museum of the Asiatic Society of Bengal in January last. I do not feel at present competent to give any correct account of the state of the science of music among the Nepalese. In general it may be stated that the Newars are capable of forming bands, containing performers on all the instruments above enumerated, whose music is far from discordant although of the simplest construction. The orchestra attendant on a Hindu play enacted here last year was upwards of 50 strong, and in some of the melodramatic portions of the performance, the tunes were not only enlivening and harmonious, but of a highly inspiriting caste. The Nepalese have no written music, so far as I have been able to ascertain. Among the numerous volumes of Sanskrit literature, collected by Mr. HODGSON in *Nepal*, he informs me there is a very large one of the scenic, and musical acts, which he infers must have flourished very considerably in union with each other, previous to the Goorkha conquest of the valley. In these works the musical science is deemed of sacred origin. The Nepalese music is most probably identical with that of the plains, the Hindu portion of which is traced to the same fountain.

2.—AGRICULTURAL AND OTHER IMPLEMENTS.

No. 1.—The sugarcane mill or press, called *túsá* by the Newars, and *koulú* by the Parbuttiahs. It is of very rude and simple construction, but efficient enough for its purpose, among a people who are as yet content to go without the aid of horses and bullocks in the labours of husbandry and mercantile transport. The sugarcane grown in the valley, is for the most part, a small slender species of this plant, which ripens in the months of December and January, when its juice is expressed and evaporated to the semi-crystallised form of *gúr*, being scarcely further treated by the Newars than to the attainment of this coarse saccharine matter. All the *chiní* (soft sugar), and *misrí* (candy sugar), used in *Nepal* and its neighbouring portions of *Thibet*, is imported from the plains of Hindustan.

The *túsá* stands in the open air, either at the house of the cane-grower, or more commonly in the field, where a small shed is erected for covering the evaporating boiler, and storing the jars of *gúr*. It is formed as follows:—Two rough and strong posts $2\frac{1}{2}$ feet apart, of any common wood, are sunk in the earth, to such depth as will secure their fixedness under the heavy strain of the squeezing lever; these posts, which stand about six feet above the surface, are connected by two horizontal beams, of considerable strength, the lower one being about two feet from the ground. In front of these upright and horizontal beams, and at about three feet distance, two other posts of three feet above the surface are sunk, the space between them being occupied by the shorter limb of the squeezing lever which plays on a wooden axle, passing through the shorter limb, and the smaller posts. On the top of the smaller posts, and on the lower one of the beams which connect the larger posts, is laid a thick plank of heavy wood $2\frac{1}{2}$ feet broad, and about six feet long, its surface being grooved transversely at one end, and having a channel cut along the sides, for carrying off the expressed juice, towards the opposite termination of it, which is perforated and lies immediately over an earthen vessel sunk in the ground for the collection of the fluid. Over the grooved end of the lower plank, and under the upper beam which connects the larger posts, a thick plank about two feet long is laid, which forms in fact the upper *millstone*. The sugarcane being cut into pieces of a foot long is placed between these thick planks, the upper one being pulled down by the depression of the longer limb of the lever; the upper plank and the shorter limb of the lever connected by a strong rope or strap of leather. The lever is precisely the same as that used in *Behar* for emptying wells, without the addition of a weight at the extremity of the longer limb, and a rope for depressing it. The Newar sugarcane-squeezer is content to climb up to the elevated limb and by the weight of his body in the air and strength of his arms when he reaches the ground, to depress it.

The sugarcane juice is evaporated in common earthen vessels until it assumes the proper thickness, when with scarce any purification it is stored up for use. The dry juiceless cane is used as fuel by the poorer natives.

No. 2.—*Chikou-sá*, the oil-press of the Newars. This machine is even more rude than the former, being actually little more than two logs of wood so placed as to be capable of being separated, for a small space at one end, and again approximated, without any mechanical aid save the very poorest. The *sármi* (oil-maker) builds a house for his

press, and, like the Scottish miller, has frequently an allotted district, from which grist comes to his mill exclusively. He sometimes purchases oil seeds, and becomes a large dealer in the article, but most commonly he depends for his sustenance, on the payment by the small farmers, of a portion of the oil, from that made at his mill, which he converts into money. The machine is made and worked as follows:—Two strong wooden posts (of which about three feet are above the surface) are driven at three feet asunder into the earthen floor of the press-house and connected by a horizontal beam, under which, and over a moveable log lying on the ground, one end of the logs forming the *press* proper are placed. The logs, each about 16 feet long and 18 inches in breadth and depth, are laid parallel to one another, secured at one extremity as above mentioned, the opposite one from the operator being free and admitting of being separated to the extent of eight or ten inches for the introduction of the oil-furnishing seeds. The apparatus for forcibly bringing in contact the logs separated for the introduction of the grain consists of first, a stone pillar sunk in the ground, against which one of the logs rests; second, a strong rope encircling the stone pillar and passed underneath and over both logs through which the end of a long wooden lever is passed, by the depression of which the logs are approximated; third, a rude stair on which the oil-pressers ascend to grasp the end of the lever and from which they depress it, until the ground comes within reach of their footing; and fourth, a wooden peg passed through the lower part of the stair, for the purpose of holding down the depressed lever until the oil ceases to drop from the expressed seeds. The seeds (mustard is the chief) having previously been pounded in a large wooden mortar, and toasted on a large stone kept hot by a subincumbent fire, both being in the same house with the oil-press, are put (to the extent of eight or ten pounds) into a bambu wicker basket, which is introduced between the large horizontal logs. This being accomplished the operators, two or three in number, ascend the rustic staircase, and seizing hold of the erected extremity of the lever, hang by and pull it by turns, until their united efforts succeed in depressing it, when a portion of oil is obtained. An earthen vessel lying on the ground receives the oil as furnished. The Newars know not the superiority of cold drawn, over hot drawn oil, or at all events, do not manufacture the former. The oil seeds are generally three times pounded, and toasted, and as often put into the press; when thoroughly exsiccated, they are carried home and given (as in Europe) to cattle, as well as to poultry. The Newar women use this oil-cake, or oil grains, in

washing their hair, in the same way as the females of Hindustan employ the *aulah*.

No. 3.—The water-mill, *Pan-chuki* of the northern Doab and western hills, *kan* of the Newars,—is so well described in the 19th number of the Journal of the Asiatic Society, as used in the Doab, that I shall only notice the slight points in which the *Nepal* one differs from the other. Of the Doab one it is said, "a horizontal water-wheel with floats placed obliquely so as to receive a stream of water from a shoot or funnel, the said float boards being fixed in a vertical axle passing through the lower millstone, and held to the upper one by a short iron bar at right angles, causing it to revolve with the water-wheel;—*the axle itself having a pivot working on a piece of the hardest stone that can be procured from the shingle near at hand*:—this, with a thatched roof over it, and the expense and trouble of digging a cut, so as to take advantage of a fall of water, are the only articles required in this very simple mill." This description is correct for the *Nepal* mill, with the exception of the contrivance for a pivot on which the axle turns, and that for a cup for the reception of the said pivot. Instead of a rounded *pebble* being sunk into the lower end of the arbor, and a larger stone being embedded in the horizontal beam, or transom, on which the pivot revolves, we have in the *Nepal* one, an *iron* pivot driven into the nave of the water-wheel, and a square piece of the same metal sunk into the transom, and its upper surface hollowed out for the pivot to revolve in. In all essential respects they are the same, and alike rude in construction. On this point I am enabled to speak from personal observation, as I have had many opportunities of examining the water-mills of the *Dehra Dhoon*, and western hills, as well as those of the valley of *Nepal*.

The water-mill does not supersede in *Nepal* the use of the common hand-mill, as the latter is to be found in almost every cultivator's house, and exactly similar to the one used in the plains of India; viz. nothing more than a couple of circular stones, about 18 inches in diameter, the superior one resting on a pivot fixed in the lower one and having a peg of wood driven into it, by means of which it is made to revolve on the other as it lies on the ground. Mr. Elphinstone found the water-mill with a horizontal water-wheel immediately below the millstone in general use beyond the Indus, and says that it "is used all over *Affghanistan*, *Persia* and *Turkistan*." Throughout the hills from the *Sutlege* to the *Mitcher* or eastern limits of *Nepal*, its use is general, and has been so in all probability for a long period of time. More recently this kind of water-mill has been introduced into our

territories in the northern *Doab*, which lie along the upper *Jumna*, and so great is its simplicity, adapting it to the appliances of the most ignorant natives, "that it has been adopted generally in all the canals in the *Delhi* district, as well as in those of the *Doab**."

A similar mill is said to be used in some of the most northern of the *Scottish* islands, as well in *Provence* and *Dauphiny*.

The power of the *Nepal* mill is not by any means great, nor is there much inducement for the improving of it beyond its present state. Wheat in *Nepal* holds a very low place among the farinacea in comparison with rice, in consequence of the better adaptation of the soil for the latter grain; and so small is the consumption of *atta* (meal) that the miller cannot depend on his craft, as an only means of subsistance†. As an average of the power of these mills, the produce of one after 24 hours' grinding ranges from 7 to 10 *muris* of meal, (14 to 20 maunds about,) the latter quantity being considered the maximum produce of the best.

The earnings of the miller are for the most part in kind, and the rate of payment varies according to the supply of water at the time of grinding, as well as with the quantity of grain brought by an individual. The highest rate for grinding is an $\frac{1}{8}$th of the produce, the average one is $\frac{1}{10}$th, and the lowest $\frac{1}{16}$th, this being for grinding alone, as the proprietor of the grain transports it to, and from, the mill.

The payment in kind for grinding corn is, I believe, universal in the hills, it is customary in the *Delhi* territory of India, and I can vouch for its being the invariable mode throughout a large portion of the highlands of Scotland. The rate of renumeration in the latter country was in 1827 $\frac{1}{16}$th for grinding oaten meal, $\frac{1}{10}$th for grinding barley meal, and $\frac{1}{20}$th for grinding malt, which had paid duty; a good deal more for the smuggled article, as an indemnification to the miller for the risk run in admitting the contraband to his premises.

No. 4.—*Kú, (Newari;) kodali* of the Parbuttiahs. The hoe or spade with which the Newars turn up the soil of their fields. They do not use the plough, and compared with the Indian one (which is used by the Parbattiahs), this spade is a much more efficient instrument. Its cut is from 4 to 6 inches deep. The Newars use it with dexterity and delve a field in surprisingly short space of time, turning the earth up in ridges, or narrow beds. The *kú* resembles our

* See Journal Asiatic Society, No. 19.

† *Murwa, kodu*, Indian corn, and a little rice is ground by these mills besides wheat; the ground rice is used for making sweetmeats.

adze, more than a spade, but differs from the former in having its handle projecting from the off side of the neck of the instrument. The delver holds the handle in both hands, and stooping forward raises the spade at each cut above his head, bringing it down strongly and steadily and cutting the sod rather slantingly, can make a furrow in well moistened ground of 9 inches deep. The ground for both crops of rice and for wheat, has two or three delvings. So soon as one crop is off the ground the Newar turns up his field for another one, thus gaining all the advantage from the decaying stubble, which early ploughing can give*. This immediate turning up of the soil is a matter on which the Newars lay much stress, and consequently it is very common to see the women and children of the family cutting down wheat and rice, at one end of a field, while the males are delving it from the other. The *kú* costs about one current rupee.

No. 5.—*Kurmúghan, (Newari.)* The wooden crutch-like instrument used by the Newars for breaking down the clods, and preparing the soil for receiving seed. With this they reduce the earth to the finest powder; it is all they have for serving the purpose of our iron rakes and harrows, nor is it inferior to them in the hands of the very hard-working and skilful husbandmen who use it.

No. 6.—*Kúchi-múghán, (Newari.)* The instrument used for covering over sown wheat, and *gayha* or upland rice, is a block with an upright shaft, used like a pavier's block. The *gayha* variety of rice is suited to dryish lands, is not transplanted, but laid down in seed, most carefully and laboriously, with the fingers. When sown thus, the ground is beaten down gently with the *kúchi-múghán.*

No. 7.—*Chassú-múghán, (Newari.)* A thin-edged wooden shovel, used for smoothing the flooded beds in which the seed of the *malsi,* and *tóli* varieties of rice is sown, for the purpose of furnishing transplants or seedlings. It is also used in the suburban fields, devoted generally by the Newars to the raising of culinary vegetables, pepper (red), ginger, &c. &c. where it is necessary to prepare the soil carefully and finely.

No 8.—*Kúkítcha, (Newari)* A small broad-pointed hoe, used by the Newars, for weeding the flooded rice.

No. 9.—*Chong-kúki, (Newari.)* A sharp-pointed hoe, used in weeding the gayha or dry land rice, *úrid* (a vetch), and other drill crops.

N. B. Nos. 8 and 9 are iron instruments, with wooden handles.

* Sir HUMPHREY DAVY, proved chemically the advantages of using vegetable manures *fresh*, and the practice is now general in England.—*See his Lectures on Agricultural Chemistry.*

No. 10.—*Kúe, (Newari)* A clumsy wooden shovel, used for spreading grain to the sun and collecting it in heaps after its removal from the straw. The Newars do not use the flail in threshing their corn ; there are two modes in use ; in separating the *malsi* rice from its straw, nothing is required beyond the shaking of the sheaf, and a few knocks on the ground, in consequence of the preparatory treatment undergone by this crop (or a great part of it). After being cut down it is stacked on the field and left to become heated, and to ferment for 6 or 8 days, after which the stacks are pulled to pieces, and the grain separated from the straw, winnowed by being shaken to the wind from a shallow platter made of mat and bambu and dried in the sun. The grain thus treated is called *hukwa*, and is much liked. The other mode, and the one employed at the wheat, vetch, and gayha rice harvest, is simply beating out the grain with a long stick, as it lies on the ground. All the grain in the valley is separated from the straw on the field, and carried home after being winnowed, in bags and baskets, carried banghywise or suspended from a stick, borne on the shoulders. The crops are reaped with the sickle, which instrument is similar to the European scythe sickle but smaller. The Parbuttiahs, in common with the Newars, use this instrument and rarely pull up the crops by the root, as is the practice of the Plains.

No. 11.—*Lusi-doh, (Newari.)* The large wooden pestle and mortar, universally used in India, for husking grain. A block of hard wood three feet long and 15 or 18 inches in diameter, shaped rudely like an hour-glass, and hollowed from one end down to the middle, is all that is required to form the mortar. The pestle is about four feet long, rounded for about a foot in the middle, and squared on three sides at both ends ; it is used by one or two persons, the centre portion held in the hand, and either end employed for beating the contents of the mortar. This machine is employed principally in *Nepal* for making *chúra*, or the bruised rice, so much eaten in all rice countries of India, when the people are travelling, or from other causes unable to procure time or fuel for regular cooking. The *chúra* is made thus : the rice in husk (*dhan*) being steeped in water for a day and night is toasted for a short time on a stone or large tile heated for the purpose; when thus parboiled, and while still soft, it is thrown into the wooden mortar and bruised into thin flat flakes, in which state, having previously been separated from the husks and dried, it is sold in the shops, and eaten by the people. A native of *Nepal*, or of *Bengal* and *Behar*, will be satisfied to live on this substance alone for many days together : a small quantity of *sukur* (unpurified parti-

ally crystallised sugar) added, gives it a most grateful relish, to the rarely stimulated palates of these poor and primitive people.

No. 12.—*Kúti, (Newari.)* The machine for converting the *dhan* into eatable rice, by husking it, is the same as that for making *súrki* from bricks, (hence called the *Dhenki ?)*

No. 13.—*Chan-kummú, (Newari.)* Is the banghy used in all field work, and consists merely of two small wicker baskets, suspended from either end of a piece of wood or bambu, four feet long, which the carrier bears on his shoulders.

N. B. Exact models in wood of the above noted implements, are deposited in the museum of the Asiatic Society of Bengal.

VII.—*Note on the Facsimiles of the various Inscriptions on the ancient column at Allahabad, retaken by Captain* Edward Smith, *Engineers. By* James Prinsep, *Sec. As. Soc. &c. &c.*

[Submitted at the Meeting of the 6th December.]

Captain Edward Smith, of the engineers, has rendered another signal service to the Society and to all those whose study is directed to the development of Indian history. On this occasion his task has been infinitely more trying to the patience, and has demanded more ingenuity and care, than in the comparatively simple affair of *Bhilsa:* while on the other hand there was less expected from its accomplishment; seeing that Lieutenant Burt had already taken down the two principal inscriptions by hand, one of which had been published and interpreted with the advantage of all the learning and critical acumen of Captain Troyer and of Dr. Mill himself: while the other and older text had been shewn to be identical with the four tablets of the *Feroz lát,* and was therefore included in the explanation of that monument recently given. Nevertheless, experience rife and frequent had taught me the value of a strict revision, even of the most trust-worthy labour of the treacherous eye; and I was equally surprised and pleased to find that Captain Smith had devoted himself to this unpromising labour. There were many discrepancies of letters in Lieutenant Burt's copy of the No. 1. inscription, which might be satisfactorily rectified; there were also many obscurities in the *Samudragupta* inscription, which might be cleared up; and above all, it was an object to determine the nature of the interlineary inscription to which the attention of the curious had been directed first by Lieut. Kittoe,

and which was subsequently confirmed by Mr. WALTER EWER'S inspection, as reported to the Society by himself more than a year ago.

To perform the operation in the most complete and engineer-like manner, Captain SMITH divided off the written part of the column into six lengths, and each of these again longitudinally into four quadrantal subdivisions, so that the whole surface of the stone could be printed off upon twenty-four large sheets of paper or cloth. Each paper was made to extend somewhat beyond the actual limit of the compartment so as remove any uncertainty in regard to the letters near the edge.

"On the system followed at *Bhilsa*," writes the author, "I have taken off no fewer than three impressions, that the success of one may supply parts of less happy execution in another. One impress is on cloth, and two are on paper, and together I think they give the inscription as perfectly as any inspection of the stone itself: more distinctly indeed I may say, for the relief of the colored ink brings out the characters with a precision not perceptible on the pillar."

Of these one paper and one cloth impression have been transmitted to *Calcutta*, the third being reserved in case of accident to them on the road. When united together the lettered surface measures nearly thirty feet long by nine in width, and comprehends a written superficies of 160 square feet!

Upon their arrival in Calcutta I lost no time in unfolding the roll and connecting the whole of the paper series (which seemed to have received the strongest print) into a continuous sheet, an operation rendered extremely easy by the tickets and directions accompanying them.

Our former review of the sculptured surface of the *Allahabad* pillar had divided the Hindu writing into three heads, that in the ancient or No. 1 character then unknown; that in the No. 2 or *Gaya* alphabet; and a third in the modern Deva-nágarí, consisting of a multifarious and uninteresting collection of scribblings and names. The same classification may still be retained, although we may now conveniently exchange the numerical designations for specific names, more especially as there will be presently shewn to be an intermediate class of writing between Nos. 1 and 2; of which similar evidence was furnished among the *Bhilsa* fragments.

Commencing then my inspection with the ancient Buddhist character (No. 1), I had the satisfaction to find that most of the slight discrepancies before remarked, between Lieut. BURT'S version and the published *Delhí* text, disappeared on a careful scrutiny. The few instances of preferable reading or correction of the *Feroz* record which did

occur, I have collected as emendata in the subjoined note*. To a few of them I must however take the liberty of alluding more particularly.

In the first place, it is evident, although it escaped my notice before, that the final è of many words is the representative of the Sanskrit *visarga*, and not solely of the seventh case as I had imagined, or of the plural as in the Hindustáni. Thus in the opening words, *Devánampiyè Piyadasí* represent the Sanskrit देवानांप्रियः प्रियदर्शिः the *yè* and *sè* stand for यः and सः and consequently govern singular verbs, as, *yè cha sampaṭipajisati sè sukatam kachhati: yè paṭibhogam no éti* :—&c. Again in the catalogue of birds and animals prohibited from being eaten we find that all those ending in è agree with the Sanskrit masculine nominatives as *sukè*, *arunè*, *chakavákè*, &c. while *sárikâ*, *jatuká*, *ajaká*, *eḍaká*, are agreeably to Sanskrit analogy feminines. Attention to this circumstance may help to determine some of the doubtful animals; thus *arunè* (not *arane* wild) is most probably the अरुणः of Sanskrit poetry, the fabulous elder brother of *garuda* the bird of VISHNU: the pandits say it is the adjutant. Again the *Allahabad* text has *anaṭhika-machhè*, valueless fish; and *sankuja*† *machhè*, shell-born fish; therefore it is plain the paragraph is not restricted to the feathered tribes; and, removing this restriction, we find much more plausible translations for many of the words :—*duḍí* (not *daḍi*) दुडिः a small or

* *Corrections or variations observed in comparing the Allahabad facsimile with the published Delhi text.*

NORTH COMPARTMENT, line 5 for *usihéná* and *chakho*, read *usáhéna* and *chukho*.
6 for *vadhisatichevi*, read *vadhisati cha, vá.*
7 for *anuvidhiyanti*, read *anu vi dhiyanti.*
12 for *chakho*, read *chakhu.*
13 for *vividha*, read *vividhé.*
14 for *dákhináyè*, read *dakhináyé.*
15, 16 for *heva*, *chiran thiti*, and *hotutiti*, read *hevam*, *chirathiti hotúti.*
18 for *pápam pápé*, read *pápakam pápakè*, and for *lája* and *aha*, read *lájá* and *áhá* passim.

WEST COMPARTMENT, line 17 for *payihanti*, read *payisanti.*

SOUTH COMPARTMENT, line 2 for *sáyatha*, read *se yathá.*
3 for *aranè*, read *arunè.*
4 for *jatuká ambaka pilika dadi*, read *játáka ambáki pilikâ duḍi.*
5 for *sakujámavé*, read *sankuja machhé.*

EAST COMPARTMENT, line 4 for *hetavakhéti*, read *hita sukhèti*
6 for *héméva*, read *hévam méva.*
9 for *mokhyamate*, read *mokhyamuti.*

† It is doubtful whether the *j* has not a vowel *e* also, which would make *it shell-fish*, and other fish.

female tortoise (WILSON's Dict.)—*ambáka pílikà*, the mother (or queen) ant:—the *panasè*, monkey; *kaḍhata-sayake*, the crab, the boa; *sesimalé*, the snake, the eel. (?)*

It would be endless to enumerate the instances wherein this simple emendation restores sense to passages that were before only half intelligible. I had indeed before adopted it in many cases (as *etam janè sutá*, एतं जनः श्रुत्वा, page 599), but without apprehending the invariable rule. The *Páli* language converts the *visarga* of the nominatives of such nouns into *o*, and the same change is observed in the *Sindhí* and *Zend*†; nor am I aware that the grammatical *Prákrit* or *Mágadhí* of the Hindu drama sanctions the use of the vowel *è* in place of the *visarga*. If *se*, *ye*, *te* are used at all it is either in the dual, or in the plural sense as in Sanskrit, and as in the modern *Hindí Bhásha*.

The next remark I would make is on the singular passage *nomina pápaṃ dekhati, iyam mè pápèkaṭèti* (p. 577). The words on the *Allahabad* pillar are *pápakaṃ* and *pápakè*; of precisely the same meaning, and therefore establishing the correctness of the translation. The same confirmation of authenticity is deducible from the occasional omission of the verb *huti*, the final *iti*, the substitution of *chakhu* for *chakho* and other minor variations. I have inserted in the annexed plate a few examples of disputed passages, commencing with *hidata pálaté dusampaṭipádayé*, which terminates the first long line of the *Allahabad* pillar, a sure sign that the sense is there completed, since we have a similar completion of the sentence in almost every line, as may be seen by reference to the original lithograph in vol. III. which I have not thought it worth while to recopy entire.

The five short lines in the old character that follow the *Dharmalipi* at a short distance below (see Capt. BURT's lithograph) were the next object of my inspection, I have represented what remains of them faithfully in fig. 1, of Pl. LVI. which will be seen to differ considerably from Lieut. BURT's copy of the same. The reading is now complete and satisfactory in lines 1, 2, and 5. The 3rd and 4th lines are slightly effaced on the right hand. We can also now construe them intelligibly, though in truth the subject seems of a trivial nature to be so gravely set forth.

Devánampíyasá váchanèna savata mahámátá
Vataviyá: Ehèta dutiyáye deviye ránè
Ambavaḍika vá alameva dánam: Ehevapaṭi....

* चम्बक पीलिका, पनसः कर्कटः, सर्पः, शशः मत्स्यः. The latter word however more nearly resembles शिशुमारः the porpoise.

† Is the similarity of these two names more than accidental?

Kichhiganiya titiyè deviyè senáni sava. . . .
Dutiyáyè deviyèti tí valamátu káruvákiyè

'By the mandate of DEVANAMPIYA, at all times the great truth (*Mahámátá**) is appointed to be spoken. These also, (namely) mango-trees and other things are the gift of the second princess (his) queen†. And these for ..... of KICHHIGANI the third princess, the general (daughter's.....?) Of the second lady thus let the act redound with triple force‡,

Unable to complete the sentence regarding the third queen, it is impossible to guess why the second was to enjoy so engrossing a share of the credit of their joint munificence, unless she did the whole in the name and on the behalf of them all!—It will be interesting to inquire whether by any good chance the name of queen *Kichhiganí* is to be found in the preserved records of ASOKA's reign, which are so circumstantial in many particulars. It is evident the Buddhist monarch enjoyed a plurality of wives after his conversion, and that they shared in his religious zeal.

As for the interlineation, it may be dismissed with a very few words. Instead of being a paraphrase or translation of the ancient text as from its situation had been conjectured, it is merely a series of unconnected scribblings of various dates, cut in most likely by the attendants on the pillar as a pretext for exacting a few rupees from visitors,—and while it was in a recumbent position. In the specimen of a line or two in plate LVI. the date *Samvat* 1413 is seen along with the names of *Gopála putra, Dhanara Singh* and others undecipherable. In plate LV. also may be seen a *Bengálí* name with *Nágarí* date 1464 and a bottle-looking symbol; and another below संवत १६६१ धमराज *Samvat* 1661 *Dhama rája*. These may be taken as samples of the rest which it would be quite waste of time to examine.

It is a singular fact that the periods at which the pillar has been overthrown can be thus determined with nearly as much certainty from this desultory writing, as can the epochs of its being re-erected from the more formal inscriptions recording the latter event. Thus, that it was overthrown, sometime after its first erection as a *Silasthambha* or religious monument by order of the great ASOKA in the

* See page 574. In Sanskrit देवानांप्रियस्य वचनेन (or perhaps rather वाचनेन by his desiring, wishing) सर्वत्रेा महामात्रा वक्तव्या (fit or proper to be said,) meaning perhaps that this object had been provided for by pecuniary endowment.

† तदेतत् द्वितीयाया देव्या राज्ञा चारुवक्षिका वा चर्ल एव दानम्

‡ द्वितीयाया देव्या इतीयवलमस्तु कारुवाकय, corresponding as nearly as the construction of the two languages will allow.

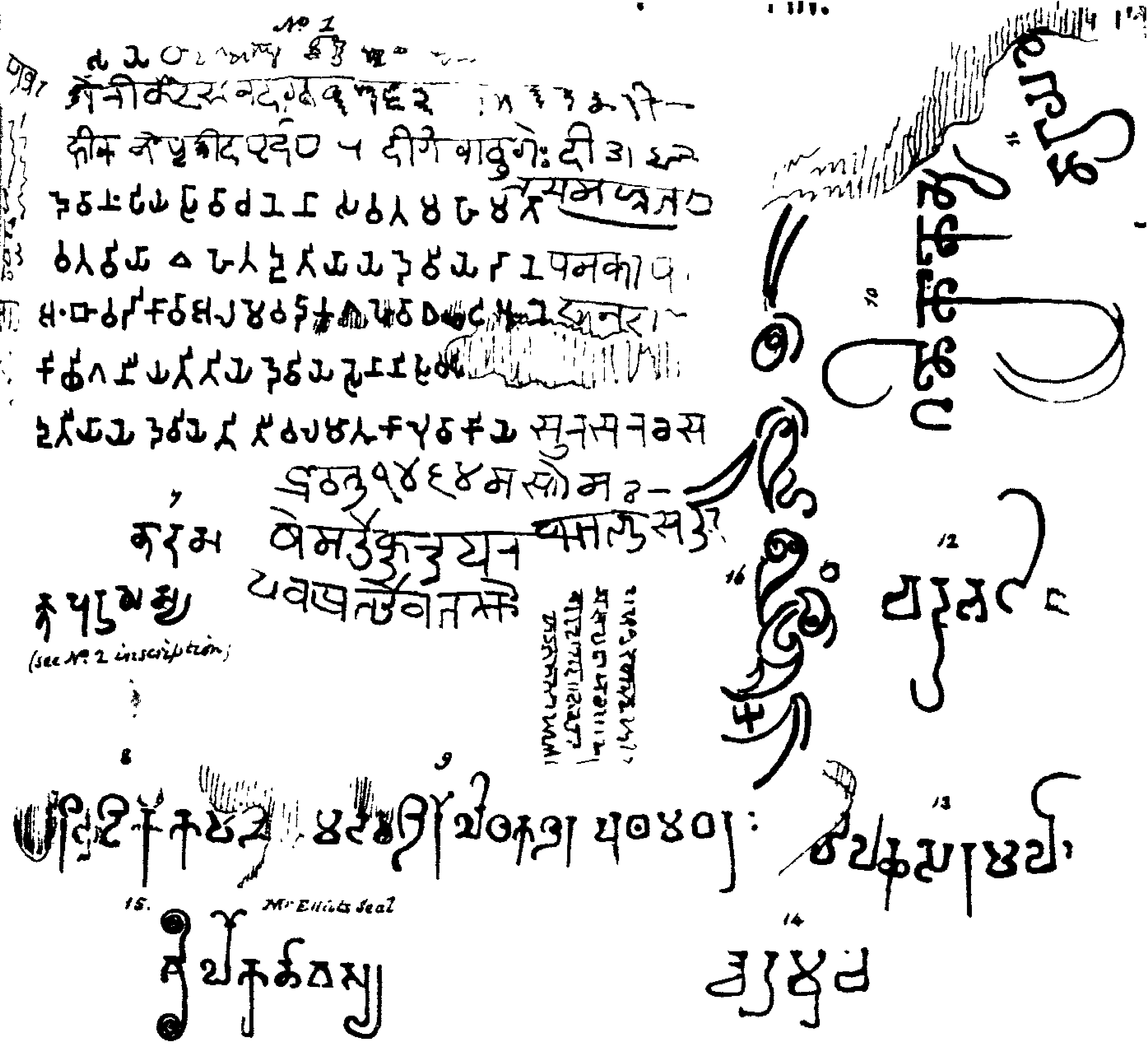
third century before Christ, is proved by the longitudinal or random insertion of several names (of visitors?) in a character intermediate between No. 1. and No. 2. in which the *m*, *b*, &c. retain the old form, as in the Gujerat grants dated in the third century of the *Samvat*. Of these I have selected all I can find on the pillar :—they are easily read as far as they go. Thus No. 7, under the old inscription in Plate LVI. is नाडस *narasa*. It was read as *Bahu tatè* in the former copy. No. 8 is nearly effaced: No. 9 may be *Malavaḍi ro liṭhakaṇḍar* (?) *prathama dharah*. The first depositor of something? No. 10, is a name of little repute: गणिकाकस्य *ganikákasya*, 'of the patron of harlots.' No. 11 is clearly नारायण *Narayana*. No. 12, चन्द्र भट *Chandra Bhaṭ*. No. 13 appears to be *halachha seramal*. And No. 14 is not legible though decidedly in the same type.

Now it would have been exceedingly inconvenient if not impossible to have cut the name, No. 10, up and down at right angles to the other writing while the pillar was erect, to say nothing of the place being out of reach, unless a scaffold were erected on purpose, which would hardly be the case since the object of an ambitious visitor would be defeated by placing his name out of sight and in an unreadable position.

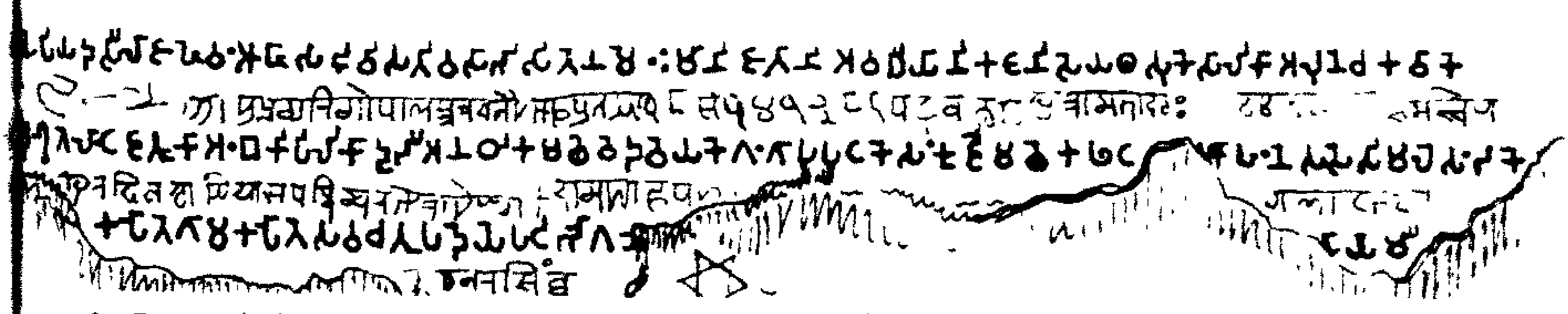
This epoch seems to have been prolific of such brief records: it had become the fashion apparently to use seals and mottos; for almost all (certainly all the most perfect) yet discovered have legends in this very character. One in possession of Mr. B. Elliott of *Patna*, has the legend lithographed as fig. 15, which may be read श्रीलोक नावस्य *Sri Lokanávasya, quasi* 'the boatman of the world.' General Ventura has also brought down with him some beautiful specimens of seals of the same age, which I shall take an early opportunity of engraving and describing.

But to return from this digression. The pillar was re-erected as '*Samudra gupta's* arm' in the fourth or fifth century, and there it probably remained until overthrown again by the idol-breaking zeal of the Musalmáns: for we find no writings on it of the *Pála* or *Sárnáth* type, (i. e. the tenth century), but a quantity appear with plain legible dates from the Samvat year 1420, (A. D. 1363) down to 1660, odd; and it is remarkable that these occupy one side of the shaft, or that which was uppermost when the pillar was in a prostrate position. There it lay, then, until the death of the Emperor Akber; immediately after which it was once more set up to commemorate the accession (and the geneelogical descent) of his son Jehangir.

A few detached and ill executed *Nágarí* names, with *Samvat* dates of 1800, odd, shew that even since it was laid on the ground again by



2. *Specimen of the interlineation of the old character, with modern Nágari. (3rd Tablet)*



3. *Doubtful passage in the opening of the inscription. (North tablet, Feroz lat).*


(terminating the first line.)

4, *another doubtful passage*


(ends the line

5, *end of second paragraph, Tal 1*


(ends

6, *beginning of 3rd Paragraph.*


ends)

general GARSTIN, the passion for recording visits of piety or curiosity has been at work, and will only end with the approaching re-establishment of the pillar in its perpendicular pride under the auspices of the British government. The welcome order has I believe at last been given to Captain SMITH, and there can be little presumption in attributing it to the urgent representations of the Asiatic Society.

The anomalous flourish (No 16) which I before mistook for a peculiar writing, is apparently merely a series of ill drawn *shanks* or shells, a common Buddhist emblem. One was depicted last month, found by Captain BURNES on a Buddhist sculpture at *Hund* near *Attock*.

Let us now turn our attention to the *Samudra gupta* inscription (No. 2.) and see what new light Capt. SMITH's labours have thrown upon it:—and here I most sincerely regret that I can no longer make over this portion of my task to my friend Dr. MILL himself, that we might benefit by the critical acumen with which he would test the numerous alterations suggested or necessitated in the former version by the infallible text now placed in our hands. I must solicit every indulgence for having ventured to undertake the examination myself.

I began by comparing the whole document, letter for letter, with Lieut. BURT's original lithograph and with Dr. MILL's transcript having the Latin interlineation, in the third volume of the Journal;—but so numerous were the changes required, that I soon found it indispensable to recopy the original on lithographic paper, and thus to present a fresh edition exactly as it stands on the column, shewing where the stone is peeled off or cut away by other writing, and where the real commencement and termination of some lines can be positively depended on.

First, then, there have been not less than *five* lines erased at the upper part of the inscription. One or two letters in each line can be still readily distinguished by their peculiar form in the midst of the modern *Nágarí* cut upon the excided parts. No conjecture can be made as to the contents of this portion, but Dr. MILL will doubtless be happy to find that the fragment in the fifth line (the first of the former version) will no longer require the strange interpretation of *ursumque lupus aureus in silvâ*, which the BURT copy constrained him to adopt.

In the next place, contrary to Dr. MILL's expectation, the whole of the upper or broken part of the inscription containing ten lines, besides perhaps six erased, proves to be metrical.

The poetical measure is variable: the greater portion is in the *srag-*

dhara chhandah, as lines 2, 3; 6, 7; 12 and 13; lines 8, 9 are in the *mandákrántá* measure; and lines 10, 11 in the *sárdúla vikrírita*; and again at the conclusion of the eulogy, line 28 contains a complete half verse in the *prithví chhandah*, laudatory of the purifying powers of Ganges water.

Each line contains half a stanza, or two *charanas*. The termination of the first *charana* is well defined by a blank space on the stone. The second *páda* or versicle of the stanza is generally erased or unintelligible—but in the 3rd and 4th lines* this also is entire.

From line 14 the composition continues uninterrupted in a florid style of prose or *gadya*.

As it generally happens that the construction of each *páda* is finite and independent, the mutilation of the poetical part does not necessarily prevent the understanding of the general purport, and it is evident that the verse was no less a string of high flown panegyrical descriptions of the prince lately defunct, namely SAMUDRA GUPTA, than the prose continuation; with the sole difference that the latter, governed by the initial demonstrative pronoun *tasya*, 'of him,' is constantly in the genitive case—until the sense is completed in the words *babhuva báhur ayam uccḥritas stambhas*, 'this lofty pillar,' has become the arm; and then follows *yasya*, 'of whom' still referring to the same person as before, rather than to the pillar-arm itself.

After the apostrophe to Ganges-water above mentioned comes an acknowledgment of the authorship of the panegyric, and of the erection of the monument to his deceased master, by the *dewan* of the young prince (whom Dr. MILL conjectures with great plausibility to be CHANDRA GUPTA II.):—and at a respectful distance the name of the officer by whom his orders were carried into execution; *avasthitamcha*, is the word employed, which from the obscurity of the copy before him Dr. MILL read *senánvitamcha*.

When I mention further that I find no invocation in lines 2, 3, on behalf of the sculptor and blackener of the letters, I have summed up all the changes, and I may venture to say amendments, which Captain SMITH's facsimile has introduced in the *general bearing* of the document embraced in Dr. MILL's analysis, (page 261, vol. III.)

But this is by no means the extent of obligation due to it:—for although lines 13-37 remain as before, eulogistic descriptions of the king in the genitive case, the purport of the greater part is entirely altered; moreover by some unaccountable oversight in Lieut. BURT's transcript the last dozen letters of the 15th line are omitted altogether,

* I adhere to the former numbering of the lines for convenience of reference.

and in their place are brought up as many from the end of the following line; and this transposition continues until the 24th line, where it will be seen that the same dozen letters that close the 23rd line are repeated! It would indeed have been extraordinary, under such unfavorable conditions, had our learned vice-president been able to give a perfect translation! we may rather wonder that he could make any thing at all of such a mass of confusion!

When restored to its natural order we find the epithets applied to the deceased Emperor of Hindustan, not only much less hyperbolical and reposing less upon mythological allusions, but crowding in a short space a most unexpected and curious survey of the political divisions of India at the time, containing even the names and titles of very many of the reigning families, and extending beyond the boundaries of India proper into the regions of the "great king" of Persia and the hordes of the Huns and Scythians! It may be poverty of imagination in the poet that has wrought us this good; for once laying hold of an idea he rings the changes upon it as long as he can find words, and then draws up with an inelegant '&c.' Thus in the 14th and 15th lines he enumerates no less than nine warlike weapons the king's brawny arms were scarred in wielding: and thus when he mentions tributary states he fortunately spares none that SAMUDRA's supremacy could in any degree comprehend! The passage is altogether so curious that I must crave permission to insert a copy of it in the roman character before I endeavour to trace any of the countries alluded to. The continual recurrence of the adjectival termination *ka*, (the prototype of the modern genitive *postposition*) led me to suspect the nature of the sentence.

16. *Kausalaka mahendra, máhakántáraka vyaghra rája, Kaurádrika maṇṭa rája, arghásht̤apuraka mahendra, mirika-uddyaraka swámi, dattairaṇḍapallaka dáyana, kánchiyaka viṣhṇu, sápávamuktaka* (17.) *Nila-rája.*

In this sentence we have the regal designations of nine princes; unless (which is probable enough) the terms *mahendra, rája, swámí, nila rája, dayana,* &c. are employed with the same general acceptation of prince, to vary the expression euphoniously.

The kingdom of *Kausala* (or *Kosala*) is well known from the Buddhist authors to be modern *Oude**, *(Ayodhya)* or *Benares,—Kási-kosala* of WILFORD. The *Vyaghra mukhas*, tiger-faced people, are mentioned in the *Varásanhita*, among the eastern countries; and *Cántára* a place south of *Allahabad*, but the name may apply to any woody tract

* WILFORD however makes *Kausala* the *delta or Sundarban* tract of Bengal. As. Res. IX. 260.

infested by tigers. The next name *Kaurádrika* is unknown, nor can the title *Manṭa rája* be well explained. It may be the district of *Cura*, near *Tahnesar*. *Argghashṭapuraka*, the next name, may be construed as the eight cities where due reverence was paid to brahmans:—*Mírika* and *uddyaraka* seem derivable from *múri* cream, and *uda* water, maritime countries;—*dattairaṇḍaka*, may be some country famous for producing the castor-oil plant;—*Kánchiyaka* may be *Kánchipur*, the golden city in the south mentioned in the *Brahmanda purána*;—*S'ápávamuktaka*, bears also an allegorical interpretation, 'freed from a curse;'—as likewise the rája's title *nila* 'the blue:'—can the *nílagiri* be his locality? it is one of the mountain divisions of *Jambudwipa* in the *Brahmanda purána* "like the lapis lazuli gem is the *Nila* mountain*." Thus it may be uncertain whether these are figurative or real names, though it is hardly to be supposed that countries purely imaginary would be introduced as subsidiary to the rule of a man just deceased. The list continues in the same strain:—

17. (*Nila rája,*) *vaingèyaka hastivarma, pálakka-ugrasena, devarashtraka kubera, kausthalapuraka dhananjaya, prabhriti sarva dakshinapatha rája griha samájánugraha janita pratáponmis'ra máhabhágyasya.*

All these names, it says, belong to that division of India entitled *Dakshinapatha*, the lowermost of the four equilateral triangles into which the *Mahábharat* divides ancient India—the *Dachinabades* of Arrian. This division, known to the contemporary of Alexander (Euemerus) was still extant in the time of Nonnus. *Vaingèyaka* is a regular derivative from *Vinga*; but neither this country nor *Pálak*, are to be found in the Pauranic lists of the southern countries, unless the latter be the country of the *Pallis*†. It must be remarked, that the names of their rulers are circumstantially given Hastivarma, and Ugrasena: and following them we have Kuvera and Dhananjaya of *Daivarashtra*, and *Kausthalapura*, places equally uncertain; though the former has some affinity to *Devagiri* or *Deogir*; *rashtra* implying merely 'country:' *Mahárashtra* might also be understood. *Kusasthallí* is said by Wilford to have been the name of *Oujein* in the *treta yuga*: Tod names the same place 'on the Indian ocean,' but the general interpretation is Canouj, a place out of the limits of the *Dakshinapatha*.

The enumeration continues in the 18th line, as follows:—

Rudradeva, Matila, Nágadatta, Chandravarma, Ganapati, Nága, Nágasena, Achyuta, Nandi, Balavarma,—adyaneka Aryavarta rája, &c. ending with *paricharakikrita sarvadevarájasya.*

* Asiatic Researches, vol. VIII. Wilford's Essay on Geography, 345.

† Placed by Wilford in Candeish, and otherwise called *Abhiras*.—As. Res. VIII. 336.

Here we have the actual names of ten rájas of India Proper or *Aryavarta*, without their respective countries, as though they were too well known to need insertion. The first, *Rudra*, probably belongs to the *Sáh* dynasty of *Saurashtra*, where the name so often occurs: *Ganapati* is also a family name: but few or none of the others can be identified in the very imperfect lists of this early period.

In the following line we have a catalogue of provinces, whose kings were probably unknown by name to the writer.

19. *Samata, taḍuvakra, kámarúpa, nèpála, kartripura-adi pratyanta, nripatibhir malavárjunáyana, yaudheya, mádraka, abhira, prarjuna, sana kanika kákaḳhara parikádibhis cha; Sarva kara dánájnákarana pranámágamana* (20) *paritoshita prachaṇḍa sásanasya.*

The first five are the names of boundary mountain states on the north-east. The first two names cannot be determined, but the text does not permit Dr. MILL's plausible reading *Sumata dárachakra*, the country friendly to pines. *Kámarúpa*, and *Nepála* are well known: *Kartripura* may possibly be *Tripura* or *Tipperah*. Then follow those more to the north and west, most of which are to be found in the lists of the north-west countries extracted by WILFORD from the Puránas, and published in As. Res. VIII. 340-343.

Malava he would make the modern *Málwa*, but this may be doubted as it is classed with *Mádraka, Yaudheya, Arjunáyana*, and *Rájanya* (? *Prárjuna*) as 'drinking the waters of the *Airávati* (Hydraotes),' and consequently in the Panjáb. *Mádraea* is placed near *Taxila* or *Takshasila*: *Yaudheya* or the country of YUDDHA is very frequently mentioned in the Puránas, as lying between the *Betasta* (Hydaspes), and *Sindhu* (Indus). WILFORD calls it Sinde Proper, the *Ayud* of travellers of the 16th century, and *Hud* of the book of Esther. It must not be confounded with *Ayodhya* or *Oude*: and it may be here remarked that the *Behat* group of Buddhist coins and sometimes Bactro-Pehleví legends on the reverse, having constantly the word *Yaudheya* on the margin in the old character, certainly belong to this kingdom.

The *Abhiras* are shepherd kings (or more probably hill tribes) in various parts of India; those here enumerated must be the *Abhiras* of the upper part of the Indus near *Attock*. *Abhisara* is often understood as *Cashmere*, the kingdom of *Abisares*, if we trust WILFORD. The two final names *sana kanika* and *kákakhara* are unknown: the former reminds us forcibly of the *kanirka* of our coins; and the latter has some analogy to the *kaka bambas* of Gen. COURT's map, to the north-west of *Cashmír*. *Kanaka* appears in WILFORD's list as an impure tribe on the west border.

Passing over the panegyric about his restoring the descendants of long deposed kings, which however is a fact not to be slightly regarded in a historical point of view, we come to another very curious passage:

Daivaputra shâhi; shâhânashâhi, saka, murundaih; sainhâdrika adibhis cha,—sarva dwîpavâsibhir, &c.

Here we have a picture of his foreign relations, the nations who used to send him presents, or tribute of jewels, coin, horses, fruit, and even their daughters! First, *Daivaputra shahi* (षाहि), 'the heaven-descended king:' this title would apply to the Parthian kings who are styled in the well known triple inscriptions, ΕΚΓΕΝΟΥΣ ΘΕΩΝ, and on the common Sassanian coins, "offspring of the divine race of gods." But the two first letters are slightly obliterated and might be read either *Dâbha*, or *Dâra-putra*: the latter, 'son of DARIUS' would still apply to the same parties, and this is confirmed by the next words षाहानषाहि in which we recognize the very Persian title شاهانشاه 'king of kings,' which prevailed to the extinction of the Sassanian dynasty in the seventh century, so that here at any rate we have a limit to the *modernicity* of our inscription. Of the *Sakas* so much has been said that it is not requisite to dwell long on them: they are the *Parthians* of WILFORD's chronological table of Indian dynasties; others identify them with the Sacæ, the *Scythians*, the *Sakya* tribe of Buddhist notoriety, and the *Vikramâditya* opponents who introduced the *Saka* era. The *Murundas*, according to WILFORD*, are a branch of the Indo-Scythians who succeeded the Parthians, and in fact the same as the *Hunas* or *Huns*. Thirteen kings of this dynasty, he says, reigned in the northern parts of India. "They are the *Morundæ* of PTOLEMY, who were masters of the country to the north of the *Ganges* from *Delhi* to *Gaur* and Bengal. They are declared in the Purânas to be *Mlechhas*, impure tribes, and of course they were foreigners. The same are called *Maryanthes* by OPPIAN in his Cynogetics, who says that the *Ganges* runs through their country."

Sainhâdri, the country of the lion *Sinha*, might safely be identified with *Sinhala*, or *Ceylon*: especially as it is followed by *Sarva-dwipa*, 'all the isles,' which must refer to the *anca diva* of WILFORD, (the Laccadives?) called by PTOLEMY the *Aigidiæ*†; but I find a more plausible elucidation in Col. SYKES' memoir on the geology of the Dakhan, which informs us that *Sainhâdri* is the proper name of the hilly range to which we give the appellation 'Western Ghâts.'

As a proud peroration to this formidable list of allies and tributaries, the poet winds up with the brief epithet words *prithivyâm apratira-*

* As. Res. VIII. 113, and table. † As. Res. VIII. 186.

thasya, 'whom in his war-chariot none in the world can rival or withstand,' the very epithet found on one of the coins of SAMUDRAGUPTA, *(apratirathas)* which I at first read *apatirurha*. However much we may allow for exaggeration it will be granted that the sovereign to whom even a fair share of all this power and vast extent of empire could be attributed, must have exercised a more paramount authority in India Proper than most of its recorded kings. The seat of his own proper kingdom is unfortunately not mentioned, but I think it may be fairly deduced negatively from this very circumstance. *Magadha, Ujjayani*, and *Surasena* are omitted; these therefore in all probability were under his immediate rule, and I may appeal again to the frequency of his coins discovered at *Canouj* as a reason for still fixing his capital at that place; his family connection with the *Licchavís* of *Allahabad*, will account for the commemoration of his deeds at that many-roaded *(aneka márga)* focus.

Of what family were SAMUDRA and the preceding GUPTAS, is nowhere mentioned. Dr. MILL's claim to a *Suryavansa* descent for them however falls to the ground from the correction of the epithet *Ravibhuva*, sun-descended, which turns out to be only the verb *babhuva*, 'was.'

But I rather avoid being led into any disquisition upon this fruitful subject, since I agree in all that has been brought forward by the learned commentator on this and the *Bhittri* inscriptions in regard to the CHANDRAGUPTA of neither of them being the SANDRACOTTUS of MEGASTHENES. On the other hand I incline much to identify him with the prince whom the Chinese Buddhist travellers found reigning in the fifth century having a name signifying "cherished by the moon*."

It now remains to give my revised transcript of the inscription at length, along with a translation effected with the aid of my pandit KAMALÁKÁNTA by whom the *Devanágari* text was scrutinized and corrected in a few places, under second reference to the original, which is for the most part beautifully distinct. I have collected all the letters into an alphabet at the corner of the accompanying plate for the guidance of those who would consult the more ancient character. Every letter has been found in the most satisfactory manner: and the only precaution to be attended to in reading is as to the application of the vowel *á*, which occupies different places in different letters *as in the Silasthambha alphabet*. Thus, it is attached to the central stroke of the *j* upward; to the second foot of the ण *n*, downwards; to the ट *ṭ*, horizontally with a curve; to ब *b*, as a hook on the centre: and to other letters at top in the Tibetan fashion. A few examples are introduced in the plate below the alphabet.

* J. A. S. VI. 65.

2 यस्यक्रान्तेविषङ्काचित सुखमनसःश्लाघ्य तस्यार्त्तेभोक्तुः..न..नोच्छ

3 (भर्त्तं) व्यश्रीविरोधान्बधगुणितगुणच्छाहतानेवकृत्वा
द्विर्लोके विश्वपातास्फट बज्रकविताकीर्त्तिराज्यं भुनक्ति

4 तदाहत्यपगुह्यभावपिशुनैरुत्कर्षिनैरोमभिः
सभ्येषूच्छ्वासितेषु (प्र) तुलकुलजमाननोद्दी ...

5 स्नेहव्याभजितेनबास्य गुरुणा तत्वीक्षिणा चक्षुषा
यःपत्राभिहितो निविष्टनिखिल .....

6 दृष्ट्वाकर्म्माण्यनेकान्य नगुजसदृशान्यङ्गतोद्भिन्नहर्ष
भवैराखाद्यय .....

7 वीर्य्योत्तप्तस्य कं चिच्छरिणमुपगतोयस्य वृत्तेप्रणामे प्यति.....

8 सङ्ग्रामेषुखभुजविजितानित्यमुच्चप्रकाराः श्वश्वोमानप्र ....

9 गोप्तोत्तुङ्गैःस्फुटबज्ररसस्नेहपुल्लैर्म्मनोभिः पश्चात्तापाव .....

10 उद्वेगोदितबाडवीर्य्यरभसादिकेनायेनच्चचो
द्यान्मुत्यान्यांतनागृसेषु .....

11 दण्डैर्य्यईयतैर्वकोत कुलजंपुष्पन्धायक्रीडता

12 धर्मत्राचीरबन्धाः प्रणिकरशुचयः कीर्त्तयःसंप्रताना
वैस्यतुषभद प्रग्रमेर....मुर्ड .....

13 सव्याजःसूक्तमार्गः कविमतिविभवोत्सारणंचप्रकाश्य
कोनुस्याद्योस्य नस्य.....

14 तस्य विविधसमरशतावतरणदक्षस्य स्वभुजबलपराक्रमैकबन्धोः
पराक्रमाङ्कस्यपरशु शङ्कुपहनि प्राप्तासि तोमर

15 वत्सपाल नाराच वैतस्तिकाद्यनेकप्रहरण विरूढाकुल व्रणशताङ्ग
शोभा समुदयोपचित कान्ततर वर्ष्मणः

16 कौसलक महेन्द्र महाकान्तारकव्याघराज कौराट्टकमण्टराजाग्र्या
रुपुरकमहेन्द्र मौरिकोद्धारक स्वामि दत्तैरणडपल्ल कदयनका
खेयक विष्णु शापावमुक्तक

17 गौपराज वैष्णेयक हस्तिवर्म्म पालक्ककोग्रसेन देवराष्ट्रक कुबेर

कौशलपुरक धनञ्जय प्रभृति सर्व्वदक्षिणापथ राज ग्रहसमा
जानुग्रह जनित प्रतापोन्मिश्र महाभाग्यस्य

18 रुद्रदेव मतिल नागदत्त चन्द्रवर्म्म गणपति नाग नागसेना च्युत
नन्दि बलवर्म्मादयनेकार्य्यवर्त्तराज प्रसभोद्धरणोद्वृत्त प्रभाव
महतः परिचारकीकृत सर्व्वदेवकराजस्य

19 समतटाडवक्र कामरूप नेपाल कर्त्तृपुरादि प्रत्यन्त नृपतिभिर्म्मा
लवार्जुनायन यौधेय माद्रकाभीर प्रार्जुन सनकानीक काकखर
परिकादिभिश्च सर्व्वकरदानाज्ञाकरणप्रणामागमन

20 परितोषित प्रचण्डशासनस्य अनेकभग्नराज्योत्पन्नराजवंशप्रतिष्ठा
पनोद्गतातिवेल भजनोपार्जितयशसः दैवपुत्रषाहि षाहानुषा
हि शक मुरुण्डैः सैंहाटकादिभिश्च

21 सर्व्वद्वीपवासिभिरात्मनिवेदन कन्योपायन दान गरुत्म दङ्काख
विषयभुक्ति शासन कांचनाद्युपायसेवाकृत बाहुवीर्य्यप्रसरध
रणिबन्धस्य पृथिव्यामप्रतिरथस्य

22 सुचरितशतालङ्कृतानेकगुणगणासक्तिभिश्चरणतलप्रमृष्टान्यनरपति
कीर्त्तेः साद्भसाभ्युदयप्रलयहेतुपुरुषस्याचिन्त्यस्य भक्त्य वनतिमात्र
ग्राह्यमृदुहृदयस्यानुकम्पावर्त्तनेकशःशतसहस्र प्रजयितः

23 कृपणदीनानाथातुरजाङ्गनेरणामन्त्रदीक्षाप्रियगानसिद्धस्य विग्रहा
वताडकानुग्रहस्य धनदवरुणेन्द्रान्तकसमस्य स्वभुजबलविजिता
नेक नरपति विभवप्रत्यर्प्पण नित्यवाक्यतायुक्तपुरुषस्य

24 निश्चितविदग्धमतिक गान्धर्व्वललित व्रीडित त्रिदशपति गुरुतुम्बु
नारदादेर्व्विद्वज्जनोपजीव्यानेक काव्यक्रियाभिः प्रतिष्ठित कवि
राजशब्दस्य सुचिरानुभूतध्यानेकाद्भुतोदार चरितस्य

25 कान्तसमयक्रियानुविधानमात्रमानसस्य लोकधाम्नो देवस्य महा
राज श्रीगुप्तप्रपौत्रस्य महाराज श्रीघटोत्कचपौत्रस्य महाराजा
धिराज श्रीचन्द्रगुप्तपुत्रस्य

26 लिच्छविदौहित्रस्य महादेव्यां कुमारदेव्यामुत्पन्नस्य महाराजाधि

राज श्रीसमुद्रगुप्तस्य सर्व्वपृथिवीविजयजनितोदय व्याप्तनिखि
लावनितलात्कीर्त्तिमितस्त्रिदशपति
27 भवनगमनावाप्तललितसुखविचरणमाचक्षाणः बभूव बाऊरयमु
च्छ्रितःस्तम्भः यस्य प्रदानभुजविक्रमप्रश्नमशास्त्रवाक्योदयोरूप
र्ध्वपरिसञ्चयोच्छ्रितमनेकमार्गीयशः
28 पुनातु भुवनत्रयं पशुपतेर्जठान्तर्गुहानिरोधपुरिमोक्षशीघ्रमिव
पाण्डुगाङ्गंपयः ॥ एतच्च काव्यमेषामेव भट्टारकपादानां दासस्य
समीपपरिसर्पणानुग्रहोन्मीलित मतेः
29 खाट्टपाकिकस्य महादण्डनायक ध्रुवभूतिपुत्रस्य सान्धिविग्रहिक
कुमारामात्यम (ह्रीषाच) क हरिसेनस्य सर्व्वभूतहित सुखायास्तु
30 व्यवस्थितंच परमभट्टारकपादानुध्यातेन महादण्डनायक तिल
भट्टकेन

Translation.

[Beginning with the *fifth* line, with *yasya* which has reference to a preceding eulogistic epithet in the genitive case. This is numbered verse 2 in Dr. MILL's translation.]

2.....In the midst of pleasurable things happy in body and mind; levying his revenue in strict conformity with the shástras*.....

3.....Destroying unhappiness, and putting an end to those who cause it; greedy for eulogistic praise, glory and extended rule:—

4.....Whose enemies amazed at his cavalcade and warlike armament ask what manner of man is this?—Among his elevated counsellors.....

5.....Whose eyes filled with the tears of affection, when in consequence of his written mandate (his son or wife had been recalled?)

6.....Having seen his former good acts, delightful as nectar, his wife was much pleased.....

7. Inflamed with vigorous wrath against the presumptuous, but when submissive.....

8. In battles with his own arm humbling continually those who exalt themselves.....

9. Cherishing (his subjects) with an affectionate, sweet, and contented disposition.....

10....The force of his arm being gradually strengthened by youthful exercise, by himself were killed.....

11. [This verse is too much effaced to be made out.]

12. Whose fame is spread (over the earth), as it were a cloth white as the moon-beam.....

* Which enjoin that one-sixth of the produce of the land belongs to the king.

joining on above A of the inscription.

ALPHABET.

joining on above A of the inscription.
A
ALPHABET.

13....The lustre of his skill in well-directed learning (causes exclamations) 'Who is there that is not his?' (he is a fortress) and they are as it were grass upon his ramparts, and much wealth is locked up within him.

14. Of him, who is able to engage in a hundred different battles, whose own arm's strength is his only ally: he with the mighty chest...

15. Whose person is become beautiful from the marks of wounds received, and the scratches caused by his wielding the battle-axe, the arrow, the poniard, the elephant spike, the cestus, the scymitar, the javelin, the club, the iron dart, the dagger* and other weapons:—

16. The sovereign of *Kausala*, the tiger-king of the forests, the *manta* rája of *Kaurádri*, the sovereign of *Arghástapura*, the lords of *Míri* and *Uddyára*, the just prince of *Dattairanda*, the *Nila Rája* of *Sápávamukta*†.

17. The king HASTIVARMA of *Vinga*, UGRASENA of *Pálak*, KUVERA of *Devarashtra*, DHANANJAYA of *Kausthalapura*, &c. and all the kings of the southern roads *(dakshinapatha)*:—from his favors to all these (I say) becoming more dignified and prosperous.

18. Whose power increases by the force or clemency respectively exercised towards RUDRA DEVA, MATILA, NAGADATTA, CHANDRAVARMA, GANAPATI, NAGA, NAGASENA, ACHYUTA, NANDI, BALLAVARMA, and the other rájas of *Aryávarta*:—who has made serving-men of all the *Deva-rájas*:—

19. The magnitude of whose authority takes pleasure in exacting attendance, obedience and tribute from the kings of the neighbouring hilly countries of *Samata*, *Taravakra*, *Kámarúpa*, *Népala*, *Kartripura*, and from all the rájas of *Malava Arjunáyana*, *Yaudheya*, *Mádraka*, *Abhira*, *Prárjuna*, *Sanakánika*, (or *Sanaka Aníka*,) and *Kákakhara*.

20. Who is famous for his great aid in restoring (to their thrones) the royal progeny of many deposed rájas.

21. Whose most powerful dominion over the world is manifest in the maidens freely offered as presents, the jewels, the money, the horses, the produce of the soil, the ornaments of the precious metals brought as tribute by the heaven-descended monarch, the *Sháhán Sháhi* (of Persia), the Scythians, the Huns, by him of *Sainhádri*, and of other places; by the kings of all the isles, &c.:—who mounted on his war chariot has no competitor in the world.

22. Whose majesty exults in the princes endowed with hundreds of virtues and good qualities prostrate at his feet:—a man inspiring fear as of instant annihilation:—altogether incomprehensible;—yet tender-minded to those who are submissive and bow before him; and extending mercy to hundreds of thousands whom he has subdued:—

23. Who lends a willing ear, and a consoling tongue to the case of the poor and destitute, the orphan, and the sick:—is very kind to the brave of

* *Parashu*, *Shara*, *Shanku*, *Srini*, *Prása*, *Asi*, *Tomara*, *Vatsapála*, *Naracha*, *Vaitasti*, &c. I have translated them as described to me, rather than on dictionary authority, for in WILSON, Nos. 2, 3, 4, 5, and 9 are all given as varieties of arrows; *vatsapála*, and *vaitasti*, I do not find, the latter is probably derived from *vaitasa* a ratan.

† A country lately freed from a curse,—perhaps some physical calamity.

his army, is comparable to DHANADA (KUVERA), VARUNA, INDRA, and ANTAKA (YAMA*).

24. Who has won and again restored the riches of many kings conquered by his own right hand:—a man who strictly keeps his word, whose accomplishments in fashion, in singing and playing, put to shame the lord of the immortals (INDRA), VRIHASPATI, TUMBURU, NA'RADA, &c. Who is called 'the king of poets' from his skill in making verses—the livelihood of the learned!—whose excellent conduct proceeds from the observations stored in his retentive memory.

25. Who regularly performs all the established ordinances:—who is a very god among men:—the great-grandson of *Mahárája Srí* GUPTA; the grandson of *Mahárája Srí* GHATÔT KACHA; the son of *Mahárája Adhirája Srí* CHANDRA GUPTA.

26. Born of *Mahádeví* KUMA'RA DEVI, the daughter of LICHAVI; *Mahárája Adhirája Srí* SAMUDRA GUPTA:—how he filled while alive the whole earth with the fame of his conquests, and is now departed to enjoy the supreme bliss and emancipation of INDRA's heaven, this lofty pillar which is as it were his arm, speaks forth:—a standing memorial to spread his fame in many directions:—erected with the materials accumulated through the strength of the arm of his liberality, (now in repose,) and the sufficiency of the holy texts.

(Verse.) The clear water of Gangá that issues from the artificial pool formed by the encircled hair of the lord of men (SIVA) purifies the three worlds.

May this poetical composition of the slave of the feet of the great king, whose mind is enlightened by the great favor of admission to the presence, son of the administrator of punishments (magistrate) DHRUVA BHUTI,—the skilled in war and peace, the counsellor of the young prince, the great minister HARI SENA, afford gratification and benefit to all creatures!

Executed by the slave of the feet of the supreme sovereign the criminal magistrate TILABHATTA.

VIII.—*Interpretation of the Ahom extract, published as Plate IV. of the January number of the present volume. By Major* F. JENKINS, *Commissioner in Assam.* (See page 18.)

At the time of publishing the extract alluded to in the heading of this article, from a manuscript volume in the extinct language of *Assam*, presented to us by Mr. BROWN, we expressed a hope that ere the volume was complete we should be favored with an interpretation of its meaning through the studies of some of our friends in that thriving valley. Major JENKINS has stepped forward at the eleventh hour to save our credit, having at length as he writes "obtained it through

* Gods of the earth, water, air and fire respectively.

the studies of our *Saddar A'min* JUGGORÁM KHARGARIA PHOKAN, who was however in the first instance obliged to send a copy of the plate to *Jorhát*. It has led him to the study of the *Ahom* language, and perhaps hereafter we may get from him some additional translations."

The text is given by Major JENKINS in the *Ahomí* and in the Roman character word for word with JUGGORÁM's translation; but as we have no type, and as we find upon close comparison that the lithographed version has but one or two discrepancies in the nasals and vowels which will easily be discovered on comparison by the professed student, we must content ourselves with giving the romanized version with the verbal analysis to enable the reader to understand the spirit of this nearly monosyllabic language, and to compare it with other eastern dialects. Each *páda* is marked as in Sanskrit verse by a double line easily distinguished from the letters themselves.

1. *Pin-nāng jimmu-rānak teo-fā pāimi-ḍin,* ||
2. *Pāimi-lep-din múng-sú-teo,* ||
3. *Lāi-tyān kúp-kúp māi-tim-múng te-jao,* ||
4. *Tāṇkā khrang-fā freu-paimi nāng-hit-tyáo.* ||
5. *Khāk-khāi then-jin-kún,* ||
6. *Kang-ta ai-múi dāi-ai-nyā tejāo,* ||
7. *Khāṇta jéu-kāo lak-pin-fā,* ||
8. *Na-ring ba-tyú-múng ti-pun tejāo,* ||
9. *Tun-lan ju-mu pay-ju bān,* ||
10. *Fā-ka tāk-bā ru-mí-khāi,* ||
11. *Bau-ru fri-deo fān-mān heo-pāa-ḍāi,* ||
12. *Khen-klang-rao nāng-freng,* ||
13. *Pu-vān tāng-kā mung-rām.* ||
14. *Freu-p i nang-hit-bang,* ||
15. *Kang-ta jeù-kān lak-pin-fā,* ||
16. *Kan-frā-fak rang-múng,* ||
17. *Lai-lep ti-pún tejāo,* ||
18. *Khān-ta mān-pay jin-pin-fā,* ||
19. *Ring-láp mún-khām kai-leng pin-mun-khai,* ||
20. *Fā-pin fe-an-din,* ||
21. *Klem-klem-ak cheng-ngāo,* ||
22. *Khen-klāng-rāo nang-freng.* ||

Translation.

1. Formerly there was neither heaven nor earth but a mass of confusion.
2. There was neither island nor land in the globe.
3. Trees and grass in wild confusion overspread the land.

4. There was no lord over the heavens.
5. There was no human being but the earth was empty.
6. Frosts and frogs formed the food of the forests.
7. God, having transformed himself created the heavens as a spider spins her web.
8. The earth was a thousand *beons* thick.
9. God then rested for a few days.
10. God said, let BRAHMA be created.
11. I know not what deity or genius gave BRAHMA to us but him we received.
12. That same BRAHMA been resting on the sky as a honeycomb.
13. On this account all the world was a chaos.
14. There was no umbrella-bearing king on the earth.
15. God in the same manner as a spider, created the heavens.
16. The mount *meru* (or the white rock) supports the earth.
17. It also supports the numerous islands.
18. He after the model (he had taken) created the earth.
19. From one BRAHMA resembling a gilded egg, have proceeded many BRAHMAS.
20. That God who at first created the earth now pervades it.
21. The light that proceeded from the BRAHMA shone with brilliancy, splendour, and glory.
22. God rested on the sky as a honeycomb.

Verbal analysis.

1. ***Pin-náng*** (written *pinang* in the plate) to be—like that; ***jimmu-rának***, formerly or first beginning,—deserted or confused, chaos, ***eráká***; ***Teo-fá***, to bottom—heaven: ***páimi-din***, nonentity (is not)—earth.

2. ***Páimi***, is not; ***lep-din***, an island—land or globe; ***múng-sa-teo***, country—to wish—below or under.

3. ***Lái-tyán***, many-fold: ***kúp-kúp***, layer-layer: ***mái-tim-múng***, trees—to be filled—country; ***tejao***, end, a complete, all.

4. ***Tánká***, all or whole; ***krang-fá*** frost—sky; ***freu-páimi***, anything—non-existence; ***náng-hit-tyáo***, of sitting—of doing—master.

5. ***Khák-khái***, division of divisions; ***then-jin-kún***, jungle—calm or quiet निर्जन.

6. ***Kang-ta***, to bring or keep (a thing) into subjection; ***ai-mui***, frost—fogs; ***dái-ai-nya***, to get—hope—forest; ***te-jao*** complete.

7. ***Khán-ta***, word—only: ***jeu-kao***, thread or fibre—of a spider; ***lák-pin-fá***, having transformed—become—heaven.

8. ***Ná-ring***, thick—thousand; ***bá-tyú-mung***, beon (a measure of length containing four cubits) yojan—four kroshas—country: ***ti-pún***, place—of world; ***tejáo***, whole or complete.

9. ***Tan-lan***, of that—afterwards; ***ju-mu***, having remained—some days; ***payu-lún***, again or secondly—having remained—days (of a week), दोयम्.

10. *Fa-ka*, god—again ; *ták-bá*, having considered—said ; *ru-mi-khái*, knowing—to become—Brahma (god).

11. *Bau-ru*, I know not ; *fri-deo*, god—genius : *fán-mán*, ordered—to the Brahma : *heo-pán-dai*, gave—we received.

12. *Khen-klang-rao*, to remain पाकोकि, in the middle मद्धेय, in the air, without a prop त्रिशंकुलम्ब : *náng-freng*, like what—like a honeycomb.

13. *Pu-van*, for this reason—and *tang-ka*, whole—all ; *mung-rám*, country—*eraka* or desert or void confused.

14. *Freu-pái*, anybody—is not or existed not ; *náng-hit-bang*, to be seated—doer—umbrella-bearing ;

15. *Kang-ta*, to govern or keep in subjection—only ; *jeú-kán*, fibre—spider ; *lak pin-fá*, having transformed—became—heaven or sky.

16. *Han-fra-fak*, one—stone or rock—white : *rang-mung* upholden—country or land.

17. *Lai-lep*, many—islands ; *ti-pún* places—of world ; *tejáo*, all—and

18. *Khan-ta*, by word—only ; *mán-pay*, he—again ; *jin-pin-fá*, pattern—became—heaven.

19. *Ring-lúp*, thousand—gilding ; *mún-khám*, Brahma—like gold ; *kai-leng*, only—yellow ; *pin-mung-khai*, become—Brahma—like egg, हिरण्यर्.

20. *Fa-pin*, god—became ; *fe-an-din*, having pervaded—first—earth, भूदिव ?

21. *Klem-klem-ak*, alone with brightness—came forth ; *cheng-ngáo*, rays—glorious.

22. *Khen-kláng-ráo*, remained—in the middle—in the sky ; *nang-freng*, how ? like honeycomb.

Major JENKINS subjoins from the institutes of MENU, two passages which seem to have been the original whence the *Ahomese* (*Assamese*) version of the creation of the world was drawn. We have added the translation of Sir WILLIAM JONES.

आसीदिदन्तमो भूतमप्रज्ञात मलक्षणम।
अप्रतर्क्यम विज्ञेयम्प्रसुप्तमिव सर्व्वतः । ५ ।

5. This *universe* existed only in the first *divine idea yet unexpanded, as if involved* in darkness, imperceptible, undefinable, undiscoverable *by reason, and* undiscovered *by revelation*, as if it were wholly immersed in sleep :

तद्दण्डंमभवद्हैमं सहस्रांशुसमप्रभम् ।
तस्मिन्जज्ञे स्वयंब्रह्मा सर्व्वलोक पितामहः । ६ ।

6. That *seed* became an egg bright as gold, blazing like the luminary with a thousand beams ; and in that egg he was born himself, *in the form of* BRAHMA, the great forefather of all spirits.

The allusion to the earth and sky in the last two lines may probably be better interpreted from the 12th and 13th verses of MENU.

तस्मिन्नण्डे सभगवानुषित्वा परिवत्सरम् ।
स्वयमेवात्मनोध्यानात्तदण्डमकरोद्द्विधा । १२ ।
ताभ्यांस शकलाभ्याञ्च दिवञ्चभूमिञ्च निर्म्ममे ।
मध्येव्योम दिशश्चाष्टावपांस्थानञ्च शाश्वतम । १३ ।

12. In that egg the great power sat inactive a whole year *of the creator*, at the close of which by his thought alone he caused the egg to divide itself:

13. And from its two divisions he framed the heaven *above* and the earth *beneath*, in the midst *he placed* the subtil ether, the eight regions, and the permanent receptacle of waters.

Sir WILLIAM JONES, considered it indubitable that the Hindu doctrine of the creation was in part borrowed from the opening of *Birásít* or *Genesis*, 'the sublimity of which is considerably diminished by the Indian paraphrase of it with which MENU, the son of BRAHMÁ, begins his address to the sages who consulted him on the formation of the universe.' The Assamese seem to have gone a step further, in expanding and adulterating the tradition with the introduction of the fresh metaphors of a spider's web and a honeycomb: the latter, we suppose, representing the fixed firmament or dome spangled with lights.

While thanking Major JENKINS, and the zealous band of *American* missionaries, of whose studies and researches he often speaks in flattering terms, we must remind him that we still lack a translation of the *Khamti* passage, published in January. Will not Mr. BROWN yet save our volume from closing without it?—ED.

IX.—*Proceedings of the Asiatic Society.*

Wednesday Evening, the 6th December, 1837.

WILLIAM CRACROFT, Esq. C. S. in the chair.

Mr. JOSEPH WILLIS, Dr. COLIN JAMES MACDONALD, Major A. IRVINE, and Captain H. DRUMMOND, proposed at the last meeting, were balloted for, and duly elected members of the Society.

Nawáb JABAR KHAN, proposed at the last meeting, was upon the favorable Report of the Committee of Papers elected an honorary member.

J. H. BATTEN, Esq. proposed by the Secretary, seconded by Mr. MCLEOD.

Bábu CONOV LA'L TAGORE, proposed by ditto, seconded by Mr. HARE.

CHARLES ELLIOT BARWELL, Esq. proposed by Mr. CRACROFT, seconded by the Secretary.

Maulavi ABDUL MOJID requested the loan of the *Harishamín* and the *Suwáiq Mahriqa* to collate with an edition he is now printing.

He also made an offer of 1000 rupees for the broken series of the *Fatawa Alemgirí*, undertaking to reprint the first two volumes at his own expence:—referred to the Committee of Papers.

Read a letter from Dr. MCCLELLAND, accepting a seat in the Committee appointed at the last meeting for the superintendence of the Museum.

Bábu RAMDHAN SEN announced that he had completed the second volume of the *Ináya*, and in compliance with his agreement presented 50 copies of the work to the Society for distribution at their discretion.

Letters from the President of the Geographical Society of Paris, M. ROUX DE ROCHELLE, and from the Baron MACGUCKIN DE SLANE, forwarded their publications (see 'Library').

The following extract from the BARON DE SLANE'S letter will interest oriental scholars:

"Sachant combien vous vous interessez, Monsieur le Président, au progrès de la culture des langues orientales, je profite de cette occasion pour vous informer que la premiére livraison du texte Arabe de la geographie d' Aboulfeda sera

publiée dans peu de jours; l'impression de cette ouvrage, (qui a été confié par la Societé Asiatique de Paris à mes soins et à ceux de mon savant collègue Monsieur REINAUD de l' Institut,) s' avance rapidement, et nous ésperons pouvoir bientôt en offrir un exemplaire à votre Societé."

Library.

The following Books were presented by Lieut.-Colonel SYKES, through Captain HENNING of the Ship *Windsor*.

Remarks on the origin of the popular belief in the Upas, or poison tree of *Java*, by Lieut.-Colonel W. H. SYKES, F. R. S.

Descriptions of new species of Indian Ants.

Land Tenures of Dukhun.

Abstract of the statistics of Dukhun, 1827-28.

On the increase of wealth and expenditure in the various classes of Society in the United Kingdom as indicated by the returns made to the tax office, exports and imports, savings banks, &c. &c.

On the Geology of a portion of Dukhun, East Indies.

The following by the authors and editors respectively:

Le Diwan d'Amro'lkaïs précédé de la vie de ce poete par l'auteur du Kitab el Aghani accompagné d'une traduction et de Notes par le Baron MACGUCKIN DE SLANE, 1837—*by the author.*

Bulletin de la Société De Geographie, Vol. 6th—*by the Society.*

Recueil de voyages et de memoires publié par la Soc. Geog. &c. Paris, Vol. I. containing Geographie d'Edrisi traduite de l'Arabe en Français par P. AMÉ'DE'E JAUBERT, Vol. I.—*by the same.*

Les Oeuvres de Wali, translated with notes, by M. GARÇIN DE TASSY.

Manuel del'auditeur du Coursd' Hindoustani ou Themes Gradués—*by ditto.*

Die Stupa's oder die architektonischen Deukmale an der grofsen Konigsstrasse swischen Indien, Persien and Baktrien. VON C. RITTER—*by the author.*

Also various brochures, being extracts from the great works of the same author on the Physical Geography of Asia:—

"Der Ju (Yu) Stein, ju-chi der chinesen:—Der elephant indicus:—Weber Berbreitung der Pfefferrebe, banane und mango in Indien:—Der indische Feigenbaum, asvattha:—Ueber den tope von Manikyala:—Das Lowen and Tiger-land in Asiien; and die Opium cultur.

Transactions of the Geological Society of London, Vol. 4th, part 2nd, and their proceedings from No. 47 to 50 inclusive, with a list of its members—*by the Society.*

BELL's Comparative View of the external commerce of Bengal during the years 1835-36 and 1836-37—*by the author.*

Madras Journal of Literature and Science, Oct. by Dr. COLE, the Editor.

Vivâda-chintamani,—edited and presented by JOGDHAN Pandit, Sanskrit College.

Meteorological Journal for 1837—*by the Surveyor General.*

Received from the Booksellers:

Lardner's Cabinet Cyclopedia—Statesmen, Vol. III.

————————————————Swainson's birds, Vol. II.

Wellesley's dispatches, Vol. IV.

The secretary laid on the table a catalogue of the Arabic, Persian, Turkish and Hindu works in the Society's library, prepared by the Society's maulavi and printed in Persian for general circulation.

Antiquities.

Major P. L. PEW wrote from Delhi that at his solicitation, Mahárája HINDU RAO had handsomely presented the ancient pillar, lately lying in Colonel FRASER's grounds, to the Asiatic Society.

Major PEW stated that the fragment containing the inscription was the largest of the whole, and that its weight was very considerable so as to render it difficult to remove it from its present situation for transmission to Calcutta. It was suggested that as the shaft was already broken, and the written part considerably mutilated it would answer the Society's object to cut off the portion containing the inscription, which would thus be reduced to portable dimensions.

Resolved, that thanks be given to Mahárája HINDU RAO for this liberal gift, as well as to Major PEW, for his kind exertions on behalf of the So-

ciety; and that a letter be addressed to Government, on the strength of the permission lately accorded, requesting that the executive engineer of the *Delhi* division may be authorized to effect the conveyance of the pillar to Calcutta at the public expence.

With reference to the same pillar, Mr. T. METCALFE, C. S. forwarded a copy, made by hand with every care, of the inscription.

Major PEW's impression has anticipated this work; and it is curious to remark the errors committed by the eye in copying even the more perfect passages of the inscription.

Bábu CONOY LA'L TAGORE, begged the Society's acceptance of the *Belál Sena* copper-plate he sent for inspection at the last meeting.

Lieutenant KITTOE forwarded a facsimile of the ancient inscription on the *Khandgiri* rock, of which an imperfect copy is given in STIRLING's Report on *Cuttack*.

Lieutenant KITTOE had seized the first moment to run out by dâk to the spot, a distance of 40 miles, in order to effect this object. He was obliged to construct a scaffolding to get at the writing, and the transcription was continued even by torch-light; being much worn, it was found that the morning and evening shadows allowed the fairest chance of restoring the doubtful letters.

The result of this spirited undertaking has been to bring to light a very curious document, entirely different from those hitherto read, in the lát character. It is of a somewhat later date, and there are already several modifications of the alphabetical forms.

Colonel SYKES, Member of the Royal Asiatic Society, transmitted from London, copies of a few of the inscriptions on the caves of the Dakhan which he had collected long since, and had presented to the Branch Society of Bombay.

He had remarked on them, many of the Buddhist symbols noted on the early Indian coins, and he was in hopes the inscriptions if deciphered might throw some light upon them. The Secretary was happy to state that he had read the whole of them at once, and they presented another valuable link in the chain of the primitive alphabet, which would materially aid the labours of the Rev. Mr. WILSON, Mr. WATHEN, and Dr. STEPHENSON, on the west of India.

Dr. A. BURNS communicated copy of another copper-plate grant from *Kaira* in *Gujerat*.

This plate on being deciphered, has also led to a discovery, the value of the numerals corresponding with the alphabets of the third century, hitherto a desideratum. It is applicable to the inscription at Bhilsa, and to several documents published lately without explanation of the numerical signs.

Captain EDWARD SMITH, Engineers, forwarded impressions on cloth and paper, of the whole of the inscriptions on the *Allahabad* pillar.

The mode of executing this difficult task, and the utility of it towards the correction of the highly curious historical details disclosed, were described in a note by the Secretary, (printed in the present number.) The cloth impression, suspended from the ceiling of one side of the meeting room, spread over several chairs, after touching the ground! Capt. SMITH states that the chief difficulty of the undertaking lay in the pillar not being perfectly straight, which prevented its readily turning or rolling over.

Captain SMITH had submitted to the Military Board, several improved designs for the pedestal and capital of the pillar, adopting the Buddhist *Sinha* for the surmounting ornament.

Captain F. JENKINS communicated a translation and analysis of the *Ahom* fragment published in the January No. of the Journal, made by JAGGORAM KHARGARVA PHOKAN, Sadar Amín of *Gohati*.

Major OUSELEY forwarded from *Hoshangabad* the sketch of a *Jain* image in possession of a *Khandalwál banya*, with Prákrit inscription of 300 years old.

Lieut. MADDEN also sent from *Nimach*, copies of inscriptions on various Jain images dug up in that neighbourhood.

General VENTURA, Honorary Member, submitted for inspection some Bactrian coins, and Hindu antiques from the *Panjáb*.

Among the coins, besides a number of *Apollodotus* and *Menander*, silver, were a small silver *Lysias*, a copper coin of *Heliocles*, unique; new varieties of *Mayes* and *Azes*, and a *Kosula Kadaphes*. Among the *intaglios* in cornelian and garnet, a female head with inscription *Kesava dásasya*, another of *Ajita varma*, and others. Also a Buddhist seal of black pottery, bearing the *ye dharma* formula.

The General also sent for exhibition a series of drawings of the costumes of the Panjáb, and a portrait of RANJIT SINGH, by Mr. VIGNE.

Lieut. C. B. YOUNG, Engineers, presented some Egyptian antiquities, mummied alligators, &c.

H. WALTERS, Esq. gave, in the name of Captain BOGLE, a set of Arracanese griffin weights.

His Royal Highness Prince HENRY of *Orange* entrusted to the Secretary for exhibition, a bronze vessel formed of a cup soldered to a dish, containing, thus hermetically closed, a small quantity of water.

This vessel was found in an old temple at *Java*; local tradition stated it to contain *Ganges* water carried thither in times of yore by some pious pilgrim.

Physical.

The reply of Lieut. HUTTON was received, accepting the Society's commission to explore the *Spití* valley should he be able to obtain leave of absence.

H. R. H. Prince HENRY of *Orange*, sent three heads of the wild bull of *Java* (*Tandoe Banding*) for comparison with the *Gaur* of India.

Dr. EVANS pointed out remarkable specific differences in the forehead and position of the horns of the two animals.

Mr. H. M. PARKER, forwarded in the name of Mr. TREVOR PLOWDEN, of *Meerut*, a large slab of the peculiar flexible sandstone, described in a note from Dr. FALCONER, some meetings since.

A thinner slice of the same material sent by General Sir DAVID XIMENES shewed its properties in a very striking manner. On examination with the blowpipe and with acids the cement which unites the particles of sand proves to be silicious, but in very small quantity. The stone is easily friable, and bends to a small extent only when it seems checked as with a hinge. The motion is in any direction, and is made with very slight force.

Specimens of salt from the Persian Gulf in large cubical crystals, of copper ore, and of the mineral used in dyeing the red slippers of *Bussorah* (red ochreous lithomarge?) were presented by the Hon. Colonel MORISON.

Lieut. YOUNG presented gypsum and other minerals from Egypt, collected in his journey to India. Lieut NESBITT also added samples of the coal and iron ore (a rich carbonate) from Syria, lately mined by the Engineers in the service of the Pacha.

Lieut. H. SIDDONS, in compliance with the Society's request, forwarded a register of the tides on the *Chittagong* coast for October.

Dr. MCCLELLAND placed on record a descriptive catalogue of the series of Geological specimens collected by himself while employed with the late Assam deputation, and now deposited in the museum.

Lieut. EYRE presented in the name of Dr. LANGSTAFF a collection of specimens of the volcanic rocks of Bourbon and Mauritius, with a descriptive catalogue and notes.

The tables were covered with a portion of Dr. EVANS' fine collection of objects of natural history—birds, animals, reptiles, insects, shells, and osteological, which the proprietor tendered to the Society for purchase on virtue of the late communication from Government; but the meeting was so thinly attended that it was decided to postpone the discussion of Dr. EVANS' proposition.

A note from Colonel MAC LEOD, Chief Engineer, acquainted the Society with the progress of the experimental boring in the Fort.

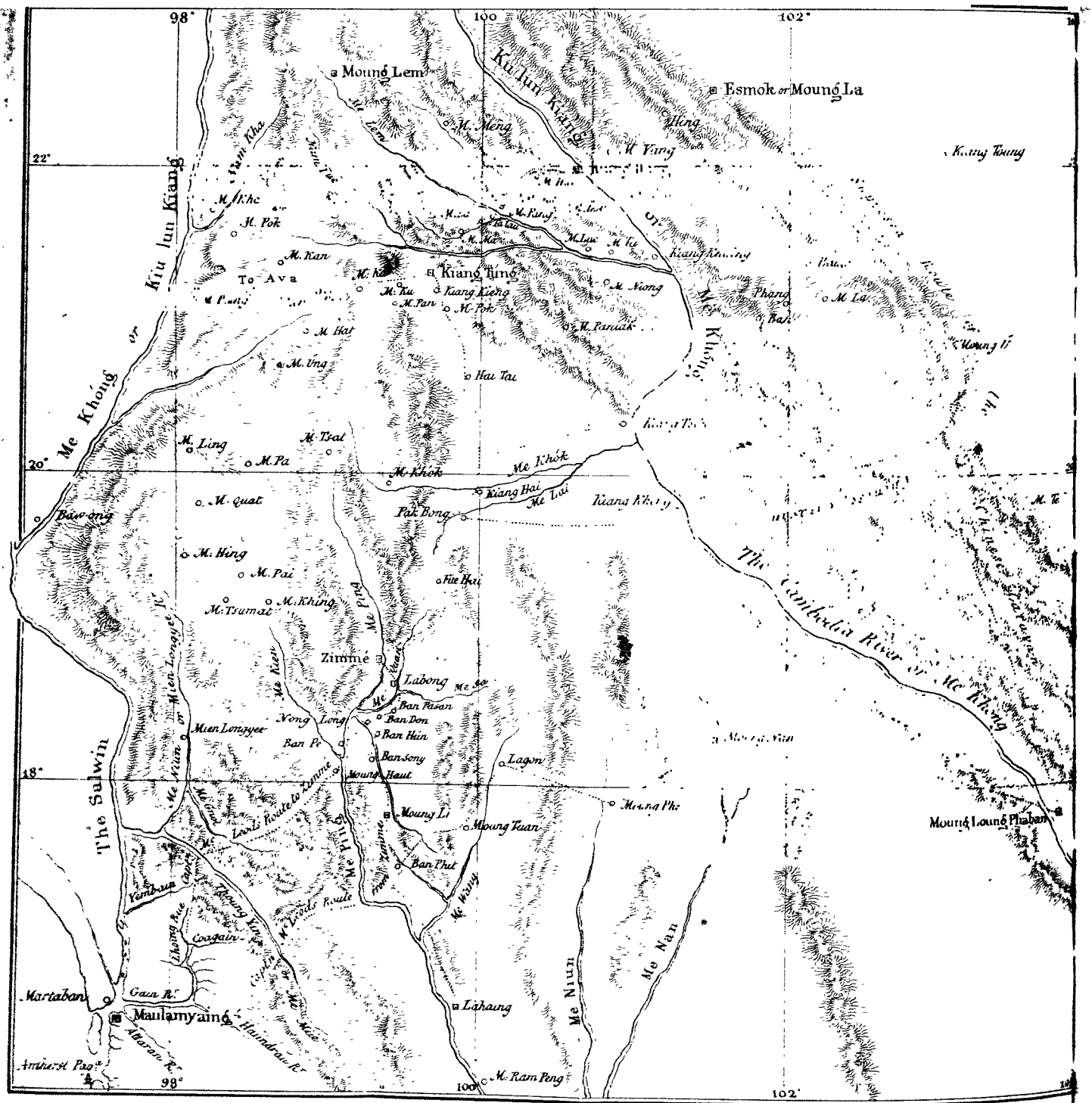
The tubes had reached a depth of 450 feet, and had met with some impediment to their further descent; though the sand continued to enter below. A rolled fragment of vesicular basalt had been brought up from this depth.

Meteorological Register, kept at the Assay Office, Calcutta, for the Month of November, 1837.

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.			Observations at 4 P. M.							Calculated Humidity.			Register Thermometer extremes.		Rain.		Wind.		Weather.	
	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Do. by Leslie's Hygro.	Dew-point.	Hair Hygrometer.	Centesimal tension of vapour by wet-bulb.	Do. by hair Hygrom.	Ditto by dew-point.	Cold on roof.	Heat in sun's rays on roof.	On the ground.	At elevation 45 feet.	10 A. M.	4 P. M.	Forenoon.	Afternoon.
1	29,866	29,831	76,7	6,5	5,4	69,6	88	70	74	75	29,761	29,726	82,8	13,2	10,6	66,6	76	45	52	57	66,0				WSW	N. W.	fine.	cumuli fine.
2	,869	,834	76,3	7,6	6,6	68,9	86	65	70	71	,787	,752	82,7	11,2	9,1	67,0	79	54	57	60	65,6				N. W.	WNW.	do. cirri.	hazy.
3	,820	,785	76,5	9,9	9,0	64,6	82	56	63	61	,838	,803	83,0	12,0	10,2	66,1	77	50	54	57	68,7				N. E.	N. E.	do.	cir. cumuli.
4	,913	,878	76,1	7,5	6,0	67,2	87	66	72	68	,829	,794	80,6	10,1	8,6	63,5	81	55	61	58					N. W.	N. E.	hazy.	cloudy.
5	,897	,862	76,5	6,5	4,8	68,5	90	69	78	76	,810	,775	78,7	7,7	6,5	65,0	82	65	63	65					N.	N.	*overcast.*	*overcast.*
6	,844	,809	77,2	5,8	5,	67,5	89	72	76	70	,768	,733	81,2	10,8	9,2	66,0	81	53	61	64					N.	N.	cumuli.	fair.
7		,864	77,2	8,8	7,2	63,0	83	59	65	64	,724	,689	82,5	12,0	10,0	62,5	75	47	51	56					N.	N.	cirri.	clear.
8	,935				7,6						,789	,754	81,0	11,9	9,7	63,5	77	50	54	56						N. W.		do.
9	,941	,864	77,3	8,9	7,6	60,5	83	59	65	58	,890	,855	81,0	11,5	9,0	63,0	77	51	54	58	65,0				N. W.	N. W.	—	—
10	,919	,886	76,7	7,6	6,7	66,0	85	65	68	72	,782	,747	81,6	12,0	9,7	62,7	78	48	56	56					N. W.	N. W.	cumuli fine.	do. fine.
11	,898	,863	78,9	8,9	7,2	64,4	83	60	65	62															N. W.	N.	clear.	do
12	,900	,863	79,3	9,1	7,4	64,5	83	59	65	61	,810	,775	83,0	10,8	9,0	63,5	80	55	59	53					NNW		do.	—
13	,930	,876	78,8	8,8	7,4	64,0	83	60	65	62	,842	,807	82,0	10,3	9,1	63,0	78	56	56	53					N.	N.	do	do
14	,925	,884	78,3	8,9	8,5	62,0	80	60	59	59	,837	,802	82,8	11,6	9,5	61,4	76	51	52	54					N.	N.	do	do
15	,910	,878	77,2	9,0	8,0	63,1	83	58	65	64	,802	,767	83,5	12,8	12,0	60,5	74	46	49	53	62,0				N.	N.	do	do
16	,896	,861	75,8	6,3	6,3	62,2	84	70	66	64	,802	,767	82,0	14,6	14,0	59,6	69	40	42	46	57,8				N.	N.	do	do
17	,948	,920	75,4	10,1	9,5	58,0	76	52	52	57	,877	,842	82,2	14,8	12,0	59,7	70	37	44	49	61,7				S.	N.	do	do
18	30,010	,971	77,4	8,9	9,5	62,0	82	59	63	61	,887	,852	82,5	12,9	10,1	61,0	75	45	51	54	64,0				N. W.	W.	do	do
19	29,954	,937	77,8	7,8	6,5	63,8	85	65	68	63	,890	,855	82,8	11,6	10,2	62,4	79	51	57	56	65,2				WS.W.	W.	do	do
20	,987	,952	77,5	6,5	5,5	66,0	88	70	74	70	,862	,827	82,5	10,8	8,4	64,6	80	55	59	55	65,4				WNW.	S.	do	do
21	,960	,925	79,0	7,3	6,0	62,5	87	67	72	58	,876	,841	83,3	11,6	8,7	65,3	78	51	56	56	65,0				WNW.	N. W.	do	do
22	,926	,951	78,8	10,1		59,2	80	55	59	54	,892	,857	82,6	13,1	10,3	63,7	74	45	49	53	63,2				WNW.	N. W.	do	do
23	,980	,947	76,8	10,2	8,8	59,0	79	52	57	57	,875	,840	82,7	14,0	11,0	60,5	71	42	45	53	58,1				N. E.	N. E.	do	do
24	,998	,968	73,6	7,3	6,9	59,4	83	64	65	64	,898	,863	81,0	10,2	8,5	64,5	81	55	58	61	65,0				E.	WS.W.	do	do
25	,008	,990	72,2	9,8	9,0	58,2	78	51	56	60	,888	,853	81,1	15,4	14,9	57,5	61	35	33	48	56,5				WNW.	N. W.	do	do
26	,938	,895	72,7	11,2	10,0	53,0	73	45	48	52	,845	,810	80,0	17,2	14,3	52,0	62	27	34	43	55,4				N. W.	N. W.	do	do
27	,935	,913	71,7	10,6	9,3	53,2	75	47	51	54	,829	,794	77,3	15,7	12,9	53,6	66	32	38	45	57,5				N.	N. W.	do	do
28	,970	,927	73,7	12,1	10,0		75	43	51		,870	,822	76,9	14,9	12,3	53,5	69	35	42	45	57,5				W.	N. W.	do	do
29	30,019	30,001	71,9	8,6	8,0	55,4	81	57	61	57	,940	,896	77,2	15,1	12,0	52,8	67	33	40	44	59,0				N.	N. W.	do	do
30	,019	29,992	72,1	7,1	5,7	55,6	87	66	72	57	,896	,854	77,5	12,2	11,0	53,0	72	45	46	45	60,1				N. W.	N. W.	do	do
Mean.	29,939	29,907	76,5	8,5	7,4	62,1	82	60	64	62	29,864	29,791	80,7	12,7	10,6	60,9	73	45	49	52	61,5							

For the last two months proper attention has not been paid to the distinctions of force in the column of wind. The mornings and evenings have been generally calm, and the breezes light during the forenoon.

Clear and fine.


98°
100
102°
22°
20°
18°
Moung Lem
Esmok or Moung La
Kiu lun Kiang
Me Khong or Kiu lun Kiang
Kiang Tung
Kiang Hung
To Ava
Me Khok
Kiang Hai
Me Lai
Pak Bong
Baw ong
Zimmé
Labong
Ban Pasan
Ban Don
Ban Hin
Ban Sony
Lagon
Mien Longyee
Nong Long
Ban Pe
Moung Haut
Moung Li
Moung Tuan
Ban Phut
Moung Phe
Moung Loung Phaban
The Salwin
Me Yuan or Mien Longyee R.
Me Ping
Me Kiew
Me Wang
Me Nam
Me Nan
Me Ram
Me Ram Peng
Lahaing
Martaban
Maulamyaing
Amherst Pag.
Gaun R.
Attaran R.
Haundraun R.
Coagain
Yembuu
Laos Route to Zimme
Route from Zimme
Me Khok
Me Lai
Me Kiew
Me Ping
Me Wang
Me Nam
Me Nan
Me Nuin
Me Ram
Me Ram Peng
Kiang Hung
Kiang Khaing
Kiang Tsung
Hai Tai
Fite Hai
Lahaing

JOURNAL

OF

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No. 72.—December, 1837.

I.—*Abstract Journal of an Expedition to Kiang Hung on the Chinese Frontier, starting from Moulmein on the 13th December,* 1836. *By Lieut.* T. E. MACLEOD, *Assistant to the Commissioner of the Tenasserim Provinces, with a route map.*

[Extracted from a Report to E. A. BLUNDELL, Esq. Commissioner, and communicated by the Right Honorable the Governor of Bengal.]

Having left *Maulamyaing* on the 13th of December, 1836, I reached the village of *Pike Tsouny* on the 16th, and was detained there by the non-arrival of the elephants until the 21st, when I finally quitted it and reached *Labong* on the 9th of January, 1837. I found the *Choukoua* who since CHOU CHE WIT'S death, had conjointly with CHOU RÁJA BRI'T the late Tsaubua's son, exercised the government over the province, absent at *Bankok* and no Tsaubua nominated; and it was with reference to the appointment of one, that these officers had been to the capital.

Though I had received information of this previous to my arrival there, yet as the chiefs of *Labong* were the first to court and establish a friendly communication with us, and as our principal supplies of cattle had been drawn from their territories, I determined on delivering your letter and presents to the officiating ruler.

My reception at the place was most friendly, and I had an interview with the CHOU RÁJA WU'N the day after my arrival. He expressed himself glad to see me, and assured me of his anxious desire to continue on the friendly footing they had always been on with us, to afford our merchants every assistance and protection in their power, and to facilitate as much as possible a free intercourse between our countries.

I was on my arrival permitted to enter the fort and pitch my tent close to the late Tsaubua's palace, for the convenience of my followers, who found cover in some sheds attached to it, which being contrary to their customs was no small proof of their friendly feeling towards us.

Our traders stated that no difficulty or delay was experienced in procuring passes, nor any impediment thrown in the way of the cattle trade.

I quitted *Labong* on the 12th and reached *Zumuè* the same day. Here no person received me nor was any notice taken of me until I had sent to express my surprise at it, when apologies were made and many false excuses offered. I was presented to the Tsaubua on the 15th, he made many professions of goodwill towards us, which from his character I have no reason to mistrust. The chiefs present endeavoured to dissuade me from proceeding towards *China*, asserting that the roads were impassable, infested by robbers, and no supplies procurable. An indirect attempt was also made to persuade me to go to *Muang Nan*, through which district the road frequented by the Chinese caravan runs, evidently wishing to relieve themselves from all trouble and responsibility. Finding that I was not to be moved from my purpose, and that I had no intention whatever of visiting *Muang Nan* itself, they said that they did not wish me to go to *China*, but that even if they did not give me permission to proceed, if I insisted on going they could not prevent me. I disclaimed all intention of forcing my way through their country, that if your request was not acceded to I should without delay retrace my steps to *Maulamyaing*. I at the same time made use of every argument I could bring forward to gain my point, and was finally told that before an answer could be given me it would be necessary to consult the authorities at *Labong* and *Lagon*, as it was customary on all matters of importance, and I should have a reply in six days. They requested me to postpone any other subject I might have for discussion until the above was settled.

I was admitted to a second conference on the 18th, arranged for the apprehension of some runaway thugs, and discussed various complaints of the cattle merchants.

Finding on the 22nd that no intelligence had been received of the officers from *Labong* and *Lagon*, who had been sent for to consult respecting my journey, it appeared to me that they were endeavouring to delay my departure until orders could be received from the *Chou-kona* I therefore called on the Chou Rája Wu'n and complained of the unnecessary delay, when he requested me to wait till the 24th for the replies.

They evidently were embarrassed how to act; the KIUNG TU'NG Tsaubua had last season sent down a mission to obtain permission for subjects to pass throgh the *Zumuè* territories and trade with us at *Maulamyaing;* this officer was well received, and the matter referred to *Bankok* and he himself detained many months on the plea of their motives being suspected, and eventually sent back with an uncourteous refusal. After this it was doubtful how the court at *Bankok* might view the present mission.

More than two-thirds of the inhabitants of *Zumuè*, *Labong* and *Lagon* are *Talien* refugees, or persons from the *Burman* provinces to the northward, who had either voluntarily settled under the Siamese Shans, having been inveigled to do so by specious promises, which were never kept, or seized and brought away during their former constant incursions into those provinces, chiefly *Kiang Túng* and *Muang Niong*. The whole of these are much oppressed and would joyfully avail themselves of any occasion to throw off the Siamese yoke. The authorities are aware of the growing hatred and disgust to their rule, particularly amongst the *Kiang Túng* and *Muang Niong* people, and they also well know, that all these people look upon us very favourably, and as their only certain means of deliverance.

Their fears and suspicions have been lately much increased by a deserter (and a person of some rank) from one of the Burman towns on the western bank of the *Salwen*. He has assured them that the king of *Ava* was bent upon adding *Zumuè* to his kingdom, and that the *Kiang Túng* Tsaubua had undertaken to effect this with the assistance of his relations in captivity.

According to the arrangement made with the CHOU RÁJA WU'N I visited the Tsaubua on the 24th and told him I much regretted that I could not longer delay my departure, and wished to quit the place the next day. He said that I had long patiently waited and as the officers from *Lagon* and *Labong* had not arrived, he would take the responsibility on himself and orders should be issued for my being escorted by the road the Chinese caravans came, which was also open to our merchants. I asked whether they had any objection to throw open in like manner the road to *China*, viâ *Kiang Túng;* this he said could not be done until the *Chou-kona* returned. I thanked him for this proof of friendship towards us, but before taking my leave inquired whether any order had been issued about the tax levied on cattle sellers, for the CHOU RÁJA WU'N had on the 22nd told me that my propositions had been complied with. To my surprise they now declined to make any alteration until the *Chou-kona* returned.

I experienced the utmost difficulty in obtaining satisfactory information about the routes to *China*. Those who could have given me information were either afraid to do so, or have been schooled to repeat what the officers of Government had told me ; others were again evidently interested in the road they recommended.

The Chinese merchants residing in the place had told me that the *Kiang Túng* road was the best, that the other I should find very difficult, having ranges of high mountains to cross, and that elephants could not travel by it. I should only find scattered hill tribes and no villages for a great distance. I therefore determined if possible to obtain permission, either directly or indirectly, to my proceeding by the road recommended by them, to enable the merchants who had come up with me, and had all their goods on elephants, to accompany me. I also hoped that the road having been once travelled by a British officer with traders, might eventually facilitate its being thrown open.

On the 27th I was happy to see part of the Chinese caravan arrive, their report confirmed what I before heard about the road. The chiefs had assured me that there was a road more to the eastward than the above mentioned one, along the eastern bank of the *Mékhong* or *Cambodia* river, with large towns and villages two or three days' journey apart. These the Chinese informed me did not exist, that they had many years ago been pillaged and destroyed by the Siamese Shans, and the road entirely overgrown with jangal and blocked up. They also urged me to try and get the *Kiang Túng* road, which was by far the best, thrown open.

These merchants informed me that they were most anxious to carry on a brisk trade with our provinces, and that the market was most satisfactory, but that the road travelled by those who visited us in 1836 was such as to render it impracticable for them to come by it. This objection I am happy to say can be easily overcome by their taking the road travelled by me on my return here from *Zumuè*. I remonstrated with the Chou Rája Wu'n against sending me by a road either impossible for elephants, or by one which had been for years closed in addition to passing me to another Shan district. Permission was ultimately given for me to select my own road from the information I should collect on the way. It was however agreed that I should not consider the road travelled by me as having been thrown open to us, but merely as a favor granted me being sent on a mission.

After many attempts to delay my departure I left *Zumuè* on the 29th in company with a Shan officer sent to escort me with six elephants, and though before quitting it I had taken care to have the arrangement

about the road officially communicated to him, yet the day after we left he received a letter from the court officers directing him on no account to permit me to proceed by *Kiang Túng*, but to escort me by the road travelled by the Chinese caravan. This was privately communicated to me, and I was convinced they had determined clandestinely to use every means in their power to prevent my journey, but to appear outwardly to be assisting me from fear of offending us.

We reached the frontier village of *Púk Bong* belonging to *Zumuè* on the 6th of February. Here the road to *Kiang Túng* branches off from the one they proposed my going by. Our progress had been slow, and the *Zumuè* chiefs had had ample time to send a reply to the officer with me, but none came. An attempt was made to delay me here, no rice was to be procured, and all the elephants belonging to the village were away in the jangals, and it would take at least four or five days to collect all I required for my journey to *Kiang Túng*. Anticipating detention on the road before I left town from the manner the authorities were putting off my departure, I had taken the precaution to load two elephants with rice and was thus perfectly independent of the Shans for supplies. The officer finding I had come prepared and would not stay for my elephants, volunteered to accompany me two marches to put me in the right road, though I had a man with me whom I had hired for the purpose of showing me the road. Finding this officer after the two marches inclined to come on, I encouraged him to do so, wishing him to witness every thing that occurred at *Kiang Túng*, that he might report the same to his chief, and thus convince his countrymen whatever they might think, that I had truly stated to them the object of my mission.

I reached the first village belonging to *Kiang Túng* on the 13th, and the town itself on the 26th, and was received in the most flattering manner. I was introduced to the Tsaubua on the 22nd. He and all his chiefs really rejoiced at my arrival and were lavish in their terms of the respect they had for us, and assured me they had long been most anxious to open a communication with us. He tried to dissuade me from proceeding towards *China* on the plea of the states to the north-east of his territory, and through which I should have to pass, being in a state of anarchy and confusion consequent on the death of the *Kiang Túng* Tsaubua.

The town is situated in 21° 47′ 48″ north latitude and about 99° 39′ east longitude. It is a poor and thinly populated place, surrounded by a brick and mud wall, but so badly erected that it is constantly falling down. It is built on some low undulating hills

surrounded by high mountains, and the dry ditch round the town is at some places 70 feet deep, being dug from the base of the wall on the top of the hill, to the level of the swamp found at their bases. The surrounding mountains are well peopled by tribes of *Lawas*, *Ka Kuas* and *Ka Káis*, and the villages in the valleys must be likewise large and contain a great many inhabitants judging from the crowds that assemble in the town on a market day. All the towns and villages passed by me to the north and east of the capital were inhabited, the houses much better than those in town, and in every respect more comfortable.

The Tsaubua is about 50 years of age, but an active-minded man; he has been many years blind, he is much beloved by his subjects. He was the youngest of six brothers, (the eldest of whom was Tsaubua of the place) and who about thirty years ago rebelled against the Burmans and placed themselves under the protection of *Siam* and are now detained at *Zumuè* and *Labong*. The present Tsaubua on the way, finding the Siamese were inclined to break their promises to them, after vainly endeavouring to pursuade his brothers to join him, fought his way, with a small party, back to his native place, which though then depopulated he has managed to repeople. The avarice and cruelty of the Burmans drove them to the step they took. The Siamese would find the present Tsaubua a troublesome neighbour and enemy but for his misfortune.

There were formerly many distinct states in this direction ruled by Tsaubuas, who with their subjects also either joined the Siamese or were afterwards carried away. All these states now are under *Kiang Túng*, but immediately governed by a descendant of the former Tsaubuas, and no doubt, will eventually be erected again into separate states, when their inhabitants have increased, which they are rapidly doing, and will do if not disturbed by the Siamese or their tributaries.

This state is tributary to *Ava*, but the chief plainly shewed me that they had no affection for their jealous and greedy masters.

It is a great thoroughfare for the Chinese caravans, being the only safe high road from *China* to *Moué* and other Shan states to the westward of the *Salween*. It has the *Muang Lein* territory to its north, to the westward and northward of which, the wild and independent tribes of *Lawas*, and *Ka Kuis* are located, rendering the road too dangerous to be travelled, so much so, though the direct road from *Muang Lein* to *Ava* is by *Thuni*, the officers and others are invariably obliged to go to the capital by *Kiang Túng* and *Mouè*.

The Chinese bring down copper pots, silks, &c. and return with cotton and tea. Many make two trips in the year, the second time they bring down rock salt from the neighbourhood of *Esnuk* (or *Muang La* of the Shans). I met a great many very respectable merchants, (some of them residing within the palace enclosure, for the Tsaubua and all trade here) all most anxious to visit *Maulamyaing*. I gave them every encouragement to do so, as well as every information they required. But they, like the others, only wish to travel by the *Kiang Túng* road.

There is a great demand throughout this province for English goods. Our merchants sold their things at a handsome profit, the market being at present wholly dependent on *Ava*: many difficulties appear to exist to the trade from *Maulamyaing* through the *Red Kareen* country and the Burman territories along the *Salween*. There was a slight attempt made, though in a very friendly way, to delay my departure until instructions could be received from *Mouè*; however, finding I was bent on going on without delay, the point was given up and the Tsaubua made an excuse for not having me escorted in a way he could wish, for if he sent an officer of rank with me, umbrage might be taken at *Ava*. I was surprised that no decided objection was made to my going on, knowing how jealous the Burmese authorities are of any communication with their Shan provinces, and more particularly as the *Tsutke* or officer stationed in all these states to look after the Burman interest, was absent at *Mouè* where an officer of rank is placed by the government, to whom all the tributary Shan states are obliged to report the most trivial occurrence.

The merchants who accompanied me hearing of the unsettled state of the country above, and meeting with a good market where they were, decided on remaining. They were promised every encouragement and assistance, and were at perfect liberty to go when they pleased. It was agreed that no duty should be levied on any thing exported or imported by them, but of course a few trifling presents will be expected as is customary amongst the Burmans.

My elephants being unable to proceed and the road being over mountains and no forage procurable on them, I provided myself with ponies and quitted *Kiang Túng* on the 1st of March, and after passing through many large villages and some towns the residence of petty Tsaubuas, reached *Kiang Húng* (the *Kien yim gyé* of the Burmans) on the 9th. I found the *Kiang Túng* Tsaubua had not exaggerated the state of things. The late Tsaubua Maha Wang had been dead some months, leaving a young son of 13 years of age. A nephew of his, son of an elder brother but who never had been Tsaubua, seized upon

the throne; the chiefs however were in favor of the son, and to prevent his being made away with secretly conveyed him to *China*, and feigned submission to the self-elected Tsaubua. They managed to assemble a large force near the town, and when these plans had ripened, put to death many of his principal adherents, and the Tsaubua himself had only time to escape with a few of his followers. Parties had been sent out to apprehend him but had not succeeded in discovering him when I was there. The same night they killed his aged father and younger brother, and the Burman *Tsutke*, who was in disgrace during my visit, was only saved by the interposition of the chief priest of the place. He was father-in-law to the self-elevated Tsaubua's younger brother who was killed, and had been intriguing in favor of his connections.

This place is the capital of a large province comprising no less than 12 Tsaubuaships whose territories however are not extensive, and through some of which I passed on my journey.

It is tributary to *China* but in a greater degree than the term generally implies, and might be almost said to be a Chinese province, for it pays a regular land revenue and other taxes to that kingdom, to collect and regulate which an establishment of Chinese officers and clerks are kept. But at the same time it makes certain offerings of submission and dependence once in three years to *Ava*, and which kingdom places a *Tsutke* there to look after its interest. The Tsaubuaship has always belonged to one family, but the nomination of the individual rests with both the kings of *China* and *Ava*; that is, one appoints and the other is expected to confirm it; but should the selection made by one not be approved of by the other, they appear each to appoint a distinct person, and to allow the parties to decide the matter by arms, never interfering themselves;—this occurred not long ago.

The town stands in 21° 58 north latitude and about 100° 39′ east longitude; it is built on the face of a hill on the western or right bank of the *Me Khong* or *Cambodia* river. It has no fortification and the houses though good do not amount to above 500. I saw the place under great disadvantages, many of the inhabitants had fled and the place was in the occupation of troops from various quarters.

The average breadth of the river, which is confined between two ranges of hills, is at this season about 300 feet here, and when full from bank to bank about 650, and its rise judging from its high banks must be about 50 feet. It is not at any season fordable. I had no means of measuring its depth unobserved, and I was fearful of exciting their suspicions by doing so openly. Its velocity I think is

about three miles an hour. It here has a N. W. and S. E. course, and is not navigable to any distance down, its course being interrupted by falls two or three days below the town.

I was admitted the day after my arrival to an interview with some of the petty Tsaubuas, who were almost all here with their contingents. One of them the *Talan* Tsaubua, who was the minister during the former Tsaubua's time still continued in that post, and the deceased Tsaubua's chief wife, MAHA DE'VI (but not the mother of the young Tsaubua who is by the second wife) acted as regent for the young lad, nominally by the advice of the petty Tsaubuas; but the minister was all-powerful, and did as he pleased. He had been the main instrument in the scenes lately acted there, and being a shrewd intelligent man, many supposed he had some design on the throne himself. Though my reception was civil, yet they shewed a degree of suspicion of the objects of my mission, refused to permit me to proceed over to the frontiers of their own territories towards *China* without a reference, and even hinted I had better return. They at first declined receiving the presents, but after explanations accepted them for the young Tsaubua.

It was already evident that I should not he permitted to pursue my journey, but I considered it desirable to remain at the place a few days to endeavour to allay any suspicions the authorities might entertain respecting the object of my mission, and to become better acquainted with them. I therefore requested the authorities at *Esmok* or *Muang La* might be informed that I was the bearer of letters and presents to them which I wished to deliver. Though they did not for some days make the communication yet I had reason to know the letter sent faithfully detailed the object of my mission and all I had said. I dined the next day at the palace and met all the Tsaubuas and chiefs, who like the day before were clad in Chinese costumes. All the attendants were in the same dress, and the dinner &c. completely Chinese. A few cups of spirits, which some of them freely drank, soon made them throw off the formality of Chinese etiquette, and strive to make themselves agreeable, particularly the minister, who alone can speak Burmese, though all speak Chinese.

The reply from China arrived on the 23rd and the same evening the *Talan* Tsaubua and some others came to communicate its contents to me. It contained the same remarks about merchants, &c. as made by the officers on my first interview, and went on to say that British ships daily visited *Canton*, and that that was the proper route for an officer deputed on a mission to go; that they had consulted all their historical records and could not discover a precedent of any officer

coming by the road I had, that *Kiang Húng* was a town of theirs, that orders had been sent to treat me with attention and settle all matters connected with my mission, that our merchants were at liberty to trade with them, and that their own traders over whom they exercised no control could likewise visit *Maulamyaing* if they liked; but if I insisted in coming on, it would be necessary to refer the matter to *Pekin*.

It would have taken a year at least to receive an answer, and as it was not difficult to surmise what the reply would be from that haughty court, I considered it prudent to let the matter rest, hoping that at some future period more success might attend a similar attempt.

The officers had invariably prepared me for the refusal, assuring me that even they themselves had never been permitted to go beyond *Puer*, and that only on most particular business, that the Chinese were alarmed at the approach of an officer from any foreign state, but our merchants would be allowed to enter certain towns for the purpose of trade. On this point however I received many contradictory accounts, and I am led to think that *Esmok*, which is a Chinese town built close to *Muang La*, (a Shan town on the frontier and only separated by a nullah) and five days' journey from *Kiang Húng* or *Puer*, called by the Shans *Muang Meng*, three days' journey further would be the extent of their journey. I had during my long stay visited Maha Devi—she regretted much I had not gone up during her husband's lifetime, that he would have at once sent me on, and apologized for not having shown me more attention. Of this I certainly had no cause to complain; I was in the habit of exchanging frequent visits with the minister and other Tsaubuas, and I am satisfied left them impressed with a high opinion of our liberality, justice and power. They said they could only compare us with the Chinese, whom they praised highly; that they were punctual and just in all their transactions, that they insisted upon the regular payment of their taxes, and wrote long letters about a few pice; but on the other hand they never took or kept any sum however small, that they were not entitled to. They on the other hand never failed loudly to complain of the avarice, &c. of the Burmans, whom they neither respect or regard. I endeavoured to penetrate to *Ava* by *Muang Lein* and *Thainni*, or return to *Zumuè* by the road on the eastern bank of the *Cambodia* river, for the purpose of meeting the *Chou-kona* of that place, but I regret to say that I was most reluctantly obliged to retrace my steps by the road I went up, in consequence of a despatch having reached *Kiang Húng* from *Kiang Túng* entreating the *Talan* Tsaubua to send me back there, as

orders had been received from *Monè* not to permit me to proceed towards *China* until the commands of the King of *Ava* were received. In consequence of which, orders had been received from the young Tsaubua to escort me back by the road I had come when I wished to return. The minister confessed that he was under obligations to the *Kiang Túng* Tsaubua, and if he now allowed me to go by any other route, it would certainly get the Tsaubua into trouble; he hoped therefore I would not press the point, as it was painful to him to disoblige me, and he would be obliged to apply for instructions from the young Tsaubua, if I insisted on it. I thought it advisable to wave the question with a good grace, for there can be no doubt that the reply would have been in favor of the *Kiang Túng* Tsaubua's request; because that chief has considerable influence with his state, the young Tsaubua being betrothed to his daughter.

The day before I left I met all the chiefs at dinner at the palace, when they all, and particularly the minister, gave me assurances of their friendship for us, and of their anxious desire to promote a free intercourse between our countries, that no duty whatever should be levied on our traders, and urged me strongly to repeat my visit, and to send up some merchants, and they would, to ensure them a safe passage to *China*, send people with them. I was likewise told by him that their suspicions had been raised respecting the objects of my visit, by certain reports propagated by the Burman *Tsutke* and his party, who though in disgrace had sufficient influence over their ignorance to excite their fears, but that my frequent intercourse with them soon removed their mistrust, and he hoped the unreserved and friendly manner they had lately communicated with me had removed any unfavorable impressions I might at first have formed of them. I met there many Chinese merchants settled at the place as well as those belonging to caravans. They were all eager to trade with us, and promised to visit *Maulamyaing*. They also urged me to send some of our merchants up to them. This however would not answer; for they would be obliged to transport their goods chiefly on elephants, against which there are many objections. They require from us gold thread, carpets, bird's nest, sea slugs, dates, ivory, &c. &c. Some samples of Pernambuco cotton I showed them pleased them much. Cotton would also be an article of export, for this is what they chiefly carry away from *Muang Nan*, and the difference of price, which is much in favour of the province, will more than renumerate them for the distance they would have to come for it. Their imports into *Kiang Húng* are the same as to *Kiang Túng*. I there met with woollen cloth brought by

them much cheaper than it can be purchased here. Their exports consist principally of tea, which with a little cotton is a staple of this territory. It grows on both sides of the *Me Khong* in large quantities, but like the samples I have brought down, with some seed, of a coarse description, but whether from their mode of preparing it, or naturally so, I cannot tell.

Their state extends on both banks of the *Me Khong*: it is bounded on the N. and N. E. by the *Yunan* province; to the E. by *Cochin China*; to the S. E. by the *Lauchang* territory, and to the south on the eastern bank of the *Mekhong* by both *Muang Luang Phaban* and *Muang Nan*; to the southward on the western bank of the river by *Kiung Khiaing* (a small state ruled by a Tsaubua tributary to *Ava*) and *Kiang Túng*; to the westward by *Kiang Túng*; to the north-west by *Muang lun*, which last stands in the same relation to *China* and *Ava* as it does.

I quitted *Kiang Húng*, on the 26th of March and reached *Kiang Túng* on the 31st. Here I saw the order from *Monè* not to permit me to proceed until further orders, but if I insisted in going on, they were not to prevent me but merely to take a list of the followers, &c. with me. During my stay I frequently saw the Tsaubua who as before urged me to use every endeavour in my power to obtain a free passage through *Zumuè* for all merchants, which could easily be done by British influence. He assured me it was far from his thoughts to attempt to rescue his relations from captivity, though strong enough to do so, but he knew the attempt would lead to bloodshed and be the means of their being removed to *Bankok*. He complained of the Siamese after so many years of quiet, which he entirely attributed to us, again making aggressions into the territories of the Burmese, alluding to the affair at *Mak mai*; that he had hoped we should not have permitted any thing of the sort, that he had lately re-established many of his deserted towns towards *Zumuè*, but he much feared they would not be allowed to remain, unless we interfered. That they considered themselves prevented by the treaty of *Yandabu* making aggressions into the Siamese territories, and we ought to put a stop to their being molested and robbed by the Siamese. He urged me to repeat my visit and to beg of you to send some person up to cure him of his blindness if possible.

I quitted *Kiang Túng* on the 4th of April, and reached *Zumuè* on the 18th, having left the elephants to come on by short marches, the country was completely burnt up and no forage to be found.

The Shan officer who had accompanied me had returned from *Kiang Túng*, the Tsaubua told him he was glad to hear I had arrived

there safe, and inquired particularly about my proceedings at *Kiang Túng*, and was satisfied by the reports made. The *Chou Rája Wún* was not pleased, and when I saw him said he was very much afraid the *Chou Houa* might be displeased at my going to *Kiang Túng*, and all the blame would fall on him. Some merchants who had come up from *Maulamyaing* for the purpose of joining me had been there some time. I endeavoured to obtain permission for them to proceed by *Kiang Túng*, but the *Chou Rája Wún* would not hear of it, but said they were at liberty to go by the eastern road, which had been conceded to us, that every assistance would be afforded them, and passes given. He begged me to remain until the *Chou Houa's* arrival.

On the 22nd I held a long conference with the Tsaubua on various points. It ended in positive prohibition to the merchants passing through *Zimmay* to *Kiang Túng*. The Shan officer who accompanied me was even put in irons, and was only released through my intercession with the *Chou Houa*, who entered the town on the 6th May.

The king of *Siam* had forbidden all communication between the two states on any account, that they never could eradicate the hatred they had for the Burmans, and the *Kiang Túng* people though not Burmans were subjects of *Ava*, and therefore could not for a moment be trusted. But there was no objection whatever to our merchants going by the road on the eastern bank of the *Me Khong* or *Cambodia* river, but they would not permit any of the Shans from *Kiang Túng* or any place in any way subject to *Ava* entering their territories.

I could not leave the place until the evening of the 11th in consequence of a little discussion about a woman; a native of India had taken from this place and was attempting to extort money from her, and threatening to sell her, and to obtain satisfaction for a case of theft that had occurred many days before, and though some of the parties were secured, they were screened by the *Chou Houa's* officers, and the investigation put off in a most disgraceful way. The first the *Chou Houa* settled by allowing me to bring the woman away with me, and as I could wait no longer, he promised to have the matter inquired into before some of my people whom I left behind; and the officers, who had not been more attentive, punished.

In spite of the disagreeable discussion I had had with the chief of *Zumuè* we parted all good friends, with mutual assurances of wishing to continue on good terms with each other.

Having left the elephants behind I returned here by a different road to the one travelled in going, and which though rather longer is much better in every respect than the other.

Zumuè, *Labong* and *Lagon* have already been described by Dr. Richardson, the former is in 18° 47′ north latitude and about 99° 20′ east longitude. They form the patrimony of one family, the chiefs are therefore all connected, and the oldest usually exercises a sort of control over the others, but this appeared to me to be very small and having only reference to their external intercourse or war with the Burmans. Much jealousy exists between them all.

The *Chou Houas* of both *Labong* and *Lagon* have been lately elevated to the Tsaubuaship of those places, and the *Chou Rája Brít* of the former and *Chou Rája Wún* of the latter to the offices of *Chou Houa*. Both these states have always proved themselves anxious and willing for a free intercourse, forming a contrast in this respect with the conduct of *Zimmay*.

Cattle is abundant in *Zumuè* and *Lagon* but we have nearly exhausted the *Labong* territory. The inhabitants of the former place, to escape the oppressive exactions they are subjected to when they sell cattle, deliver them to our traders in the *Labong* territory, and thus avoid having their names registered.

There is little or no trade in these districts; the inhabitants procure salt from *Bankok*, and export paddy and stick lac. Their home manufactories supply most of their wants, and the only thing in demand from our province is the red cotton stuff called by the Burmans *shani*, and for this even the merchants do not obtain prime cost, and are only repaid by the profit they make on the cattle exported in return. In spite of their enmity towards the Burmans, large quantities of betel-nut are carried into *Kiang Túng*, which state has not a single tree of that fruit in it. Many of the chiefs, if not the whole, are aware of it and allow their followers to smuggle it out of the country for their own profit, but especially object to the poorer people doing so. The trade with *China* is very limited, about 300 mules come down annually (but not one-third laden) with silks, (raw and made up) copper pots, tinsel, lace, &c. which they exchange for cotton, ivory, horns, &c. A traffic is carried on also with the Red Kareans on the right bank of the *Salween*, exchanging cattle for stick lac and slaves. This last horrible trade has not diminished, and I regret to say some of the inhabitants of India have embarked in it. I warned them agreeable to your commands of the penalty attending the introduction of any of those unfortunate creatures into our provinces.

One of the Red Karean chiefs accompanied the *Chou Houa* to *Bankok*: his as well as that chief's visit had reference to an attempt made some months ago by the Siamese Shans, to bring away the inhabitants

of some Burman villages on the western bank of the *Salween*, who they had been informed were willing to place themselves under them, if a force was only moved towards the frontier to protect them. The Burmans however met them with a large force and obliged them to return. The Red Kareans had sided with the Siamese and were eager that an attack should be made, with the sole view of getting a few slaves for sale. This useless adventure was strongly opposed by many of the chiefs, but the *Chou Houa* and *Chou Rája Wún* of *Zumuè* had their own way. They were, I heard, preparing to attack some small towns on the eastern bank of the *Salween* belonging to *Monè*, when I left.

The Tsaubua is old, upwards of 80, he is a mild and well disposed person, but now entirely given up in making offerings to the pagodas and priests, so that the *Chou Houa*, who is a clever and able man though naturally of a bad disposition, and much feared and disliked by the people, is in fact the ruler, and has his own way on all matters.

The states of *Muang Nan* (which is as large as *Zumuè*) and *Muang Phe*, (smaller even than *Labong*) stand in the same relation to each other as the other states before mentioned do. Cattle is abundant in these. They produce more cotton than the others and a greater number of Chinese visit them, and many even from *Zumuè* go there to procure a return load.

These territories occupy the space between the *Salween* and *Cambodia* rivers, but on the eastern bank of the latter lies the town and territory of *Muang Luang Phaban*, said to be much larger in extent than any of the others, and to be the capital of *Laos*. This place is also visited annually by the Chinese caravans, but only one or two of our traders have yet reached it, and they report the authorities are anxious, as those of *Muang Nan*, to open a communication with us.

The tribute paid by these states to *Siam* is small: the five first pay theirs in teak-wood chiefly, floated down the rivers which pass through each province, and fall into the *Me nan*. *Muang Luang Phaban* pays its tribute in ivory, eagle-wood, &c. there being no water communication between it and *Bankok*. This last state is also said to be tributary to *Cochin China* and *China*; to the former it sends presents triennially, and to the latter once in eight years it sends two elephants.

With reference to the road that is travelled generally between this and *Zumuè* and by which I went, it runs for six days over a flat country, then the country becomes gradually mountainous and continues so for 12 marches, to *Muang Hunt*, the frontier Siamese village situated at the foot of the range. The whole distance is much intersected

by numerous large and rapid torrents. Access with a regular army and its equipments is impossible by this road and the Shans are well aware of it. There are numerous passes however of which we are totally ignorant, and of which they wish to keep us in the dark. From *Muang Hunt* to *Zumuè*, four marches, is through the valley of the *Me Piu*. From *Zumuè* to *Esmok* or *Muang La*, there may be said to be only two roads, the others being only branches of them and occasionally slightly deviating from them. The one I proceeded by is for three days over low hills, then for eleven marches to the frontier village belonging to *Kiang Túng, Hai Tai*, through valleys and occasionally over a few low hills, then over high mountains to *Kiang Túng*. From *Kiang Túng* to *Kiang Húng* the country is both hilly and mountainous with small rich valleys through which we daily passed, and in which there are numerous villages all well peopled. These mountains though not passable for carts have good roads and are in every respect easier to pass over than those between this and *Zumuè*, but there is not a spot of ground amongst them in which an encampment could be formed for a large force. Water is throughout abundant and the country thickly wooded.

From *Kiang Húng* to *Muang La* is five marches, and the road runs over high and barren hills.

The other road is the one by which the Chinese caravans come to *Zumuè*; it separates from the other one the village of *Pak Bong*, from whence to the *Cambodia* river, on which the town of *Kiang Khong* stands and belongs to *Muang Nan*, it is six or seven marches. The river is there crossed, the road continues in the *Muang Nan* district for four or five days, and then enters the *Muang Luang Phaban* territory and continues in it for two or three days, after which it passes through the *Kiang Húng* territories to *Muang La*. The Chinese describe this road as very mountainous. It occupies them forty days to reach *Muang La* from *Zumuè*. The road travelled by the Chinese, to *Muang Nan*, separates from the *Zumuè* one at *Kiang Khong*, on the western bank of the *Me Khong* or *Cambodia* river.

The road I returned by from *Zumuè* is the high road from that place to *Bankok*, viâ *Lahaing*; to within two marches of that place I proceeded, and there struck off to the westward to this place. After crossing the *Me Piu* only, did we meet any high hills and then only one, which did not occupy us long in getting over. The rest of the road is chiefly hilly but of no elevation, and though no cart road exists, one might with very little trouble be made passable for an army with its equipage. From this road, those to *Muang Nan* and *Lagon* branch

off, and it is by the former I should recommend our communication with *China* being kept up.

The accompanying map has been hastily prepared to forward with this letter to enable you to trace my route and the situation of places mentioned by me. I have adopted the Shan names of places, as pronounced by them, with the exception of those which from frequent usage have become well known.

[We must solicit indulgence if the proper names in this paper are incorrectly given: it was impossible to distinguish the *n* from the *u* in the MS.—Ed.]

II.—*Abstract Journal of an expedition from Moulmien to Ava through the Kareen country, between December* 1836 *and June* 1837. *By* D. Richardson, *Esq. Surgeon to the Commissioner of the Tenasserim Provinces.*

[Communicated by the Right Honorable the Governor of Bengal.]

On the 13th of December 1836, in company with Lieut. McLeod, I left *Maulmain* and proceeding up the *Gyne* river reached *Pike-tsaung* the last village in our territories, on the 16th, here we waited four days for the elephants. On the 21st we continued our march, on the 25th crossed the boundary river separating the British possessions from those of *Siam*, and on the 26th we parted company, Lieutenant McLeod continuing his route along the now well-frequented road to *Zimmay*, and myself striking off more to the westward, by a path rarely travelled except by the scanty *Kareen* population of the surrounding hills, repeatedly crossing the *Moy Gnow* so rapid and deep at this season that almost every time we crossed some of the people were carried down the stream. On the 1st of January I reached *Mein loon gyee* (the old *Yeun saline*), having passed only one village. Here I halted to endeavour to obtain rice to carry us through the nearly uninhabited country between this and the *Thalween*. On the following day we were joined by eleven Shans, inhabitants of the town of *Whopung* and its vicinity, who had been on a trading journey to *Maulmain*; they increased our party to ninety, all of whom were traders except about twenty-five followers of mine, and carried goods to the amount of between eight and ten thousand rupees. Their means of transport were four elephants, a few bullocks, and the remainder on men's shoulders. They were in great measure dependent on me for their supply of provisions and where the distance between the villages was great I had to assist them in their carriage also. I had some discussion with the *Myo-woon* about allowing the *Monay* traders,

Burman subjects, to pass through the point of territory under his jurisdiction; he at length agreed to it, but proposed to levy a duty of 10 per cent. against which I remonstrated as exorbitant, considering the nature of the road. A reference on that point to *Zimmay* will however be necessary. On the 6th January left *Mein loon gyee* with only five days' provisions, about one-fourth of what I wished to procure. We travelled along the road used in the monsoon (the *Mein loon gyee* river being too deep to ford), and reached the *Thalween* in lat. 18° 16′ 14″ N. on the 16th without seeing a single village. In the afternoon, the *Thoogyee* of *Ban-ong* the *Ka-reen-nee* village on the western bank, crossed over to my tent and told me that he had the orders of *Pha Pho* (the chief of the *Kareens*) to detain me here as it was his intention to come this far to meet me. After some remonstrance I was obliged to comply. Our rice had been short for some days and we had now the greatest difficulty in procuring one meal a day of a mixture of cholum and rice, and even that, though the people were out all the morning, was often not brought in till the evening. On the 26th even this failed us and we were obliged to push on with the consent of the *Thoo-gyee* who declared himself unable to assist us. Travelling by the same road as on my last mission, we reached Pha Pho's village on the 28th, having passed three or four small villages. We found that Pha Pho had been gone a day or two on his way to meet us on the *Thalween*, but as he had gone by a road lying to the northward of the one we had come by, we missed him, and, what was of more material consequence at the time, our provisions which he had taken with him. The people at the village were however very attentive, and his youngest son went with two of our elephants on the following morning to a *Toung-thoo* village half a day off, for rice.

On the evening of the first of February Pha Pho returned, and on the 3rd I waited on him with your letter and presents. He received me kindly and after several friendly visits and some discussion, I succeeded in obtaining an answer to the letter, promising every facility and protection to our traders, bringing a pass from *Maulmain*, passing through his country to the *Cambodia* Shan states; he also agreed to the Shan traders passing through to *Maulmain*; he promised to levy no duties, but said that the traders must make a small present on asking leave to proceed. He assured me my visiting the other chiefs was quite unnecessary, as he was the paramount authority, and any arrangements made with him must bind the others; as I did not know what towns I might have to visit in advance, and my presents not being very numerous, though quite valuable enough for the people I had to deal with, I did not visit them.

On the 6th February I took my leave, having hired a guide to whom the chief gave his orders touching his good conduct, and directing that we should be supplied with rice. From hence the route is perfectly unknown, no European having ever travelled it. The first two days and a half our march lay through a hilly or rather mountainous jungly country nearly destitute of inhabitants, the road bad and difficult for bullocks, water sufficient though we had no streams of any note to cross. The next two days the hills continue but covered with a considerable depth of soil with few large trees and little underwood, the population pretty numerous, and nearly the whole of the hills brought under cultivation, which is performed with considerable care and neatness. During the next three days which brought us to *Ka-doo-gyee*, the first Burman village, we were obliged to make a detour to the eastward, the proper road being said to be blocked up by fallen trees, and consequently impassible for the elephants which are never used here. This threw us out of the line of the inhabited part of the country, and we saw only one small village of deserters from *Mok-mai* and no cultivation. The red *Kareen* country is considerably more extensive than I had been led to believe from the information obtained on my last mission, and the population more dense, if density may be applied to any hill people. The part of the country crossed by me was said by no means to be the most populous part of it, which indeed might have been inferred, as it lay along the borders of the desert waste they have made, separating them from the Burmans, against whom they entertain the most rancorous enmity. It will be long before there is any considerable demand for European manufactures; they are in the first and rudest stage of an agricultural population; their habitations are miserable and destitute of every thing that conduces to the comfort of human beings, to which they are scarcely allowed by the Burmans to belong: nearly all their present limited wants are supplied within themselves. Their only traffic is in stick-lac which is produced in great quantities, and slaves, whom they capture from the Shan villages subject to the Burmans lying along their frontier. From three to four hundred are annually bartered with the Siamese Shans for black cattle, buffaloes, salt and betel-nut. This horrible traffic has within the last few years been somewhat diminished by the asylum afforded to the fugitive slaves of the Shans, in our possessions here.

The only articles of exchange they are at present known to possess available as returns to this market, are tin and stick-lac, both in abundance, but the former is too heavy and the latter too bulky to be avail-

able to any great extent with our present means of transport. Tin is to be bought there for 50 rupees per 100 viss, and will fetch in the market here about 80 rupees, there is at present however but little demand for it. Stick-lac may be bought at 200 rupees the 100 baskets, weighing on an average 22 viss or 70 odd pounds, and sells here from 880 to 1100 rupees.

On the 13th of February we reached *Kudoo* a stockaded village of about 80 or 100 houses, half of which may be within the stockade. It is called a military station though there are no regular troops here, indeed the Kareens till within the last two years were constantly in the habit of carrying off the people from the very gates of the stockade, which now pay them a sort of black mail, as their own government cannot protect them; here we halted one day to rest the elephants. The people exposed some of their goods for sale but had few or no purchasers.

On the 15th we left *Kudoo* and passed the small village of *Salaung* of 15 or 20 houses of catechu boilers quite as poor as the Kareens, and *Ban-hat* of 120 houses of rather more respectable appearance.

On the 18th February we reached *Mok-mai*. Both the above villages are under Kayennee influence, and the last from which the head men came out to meet me forms the limit of the journeys of the Chinese caravans in this direction. *Mok-mai* is a stockaded town of perhaps 300 or 350 houses, the residence of one of the Tso-boas of *Camboza* (a general term for the Shan states in this quarter). I halted about a mile from the town, and sent the guide furnished me at the last village, to notify my arrival, and request to know where I should pitch my tents. He returned and told me I might either come into the town or encamp near a Poon-gyee house outside. As there was a feast in the town, I preferred the latter as more out of the way of the noisy curiosity of the people. I could not however have fared much worse any where, for all the inhabitants of the place poured out to look at me. When I reached the halting-place, such a crowd had collected that it was scarcely possible to unload the elephants; and before this was done they had become so riotous and insulting that I was obliged to send in to the Tso-boa for protection. He sent one of his *Atween-woons* and some peons who after some trouble and a good deal of rataning which the *Atween-woon* applied himself, we were enabled to pitch the tent.

A *Than-dau-tseen* came out in the evening to ask me for a list of the presents, to inquire the object of my visit, and to request me to remain here a day to give them time to report to the Head Burman

authority of *Monay*. I satisfied them in the two first points, and agreeing to halt proposed calling on the Tso-boa in the morning. I was prevented doing so by the crowds of noisy people round my tent; I had however a good deal of conversation with some municipal officers who visited me; they were all Burmans, understood the nature of my mission, and expressed a readiness, as far as they could, to forward the objects of it. I learned from them that the authority of the Tso-boa is a dead letter, the whole real power being in the hands of officers appointed by the court of *Ava*. The *Bo-hmoo-meng-tha Meng-myat-boo* (general prince MENG-MYAT-BOO) a half brother of the king's, son of a Shan princess, was at that time, and had been ever since the war, governor of the whole of the Shan countries comprehended under the general name of *Camboza tyne;* he generally resided in *Ava*, but his deputy the Tseet-kay-dau-gyee had his head quarters at *Monay* with some officers and a small military force. All business is transacted by them at the *Tat youm* or military court-house. Much surprize was expressed that I had brought letters to the Tso-boa and not to the military chiefs. I begged them to believe our sincere wish to establish friendly relations with the government in whomever vested, and assured them that had you been aware of the existence of a higher authority than that of the Tso-boa's, resident in the country, your letter would have been addressed of course to that authority. I desired them to inform the Tso-boa of the reason of my having failed to visit him to-day, and to request he would give orders or send some one to prevent the people crowding round the tent in the unreasonable way they had done, and to say I should put off my departure and wait on him on the following day. An Away-yuik came out in the morning to say the Tso-boa would be glad to see me, and I accompanied him into the town. The Tso-boa is a young man of about six and twenty, son of the last Tso-boa who was killed in the dreadful slaughter of the Shans at the stockades above *Prome*, during the late war.

I explained to him the nature of my mission, regretted that you were not aware on my leaving *Maulmain*, that my route lay through his city, expressed my certainty that you would be equally sorry that you had not had an opportunity of writing to him. I repeated my assurance of our anxiety to be on friendly terms with the Shan chiefs, and promised every protection and facility of trading to his people if they visited *Maulmain*. I requested him to encourage their doing so and begged in return that he would afford the same protection and facilities to our people visiting his country, to which he merely assented

saying "tis well." I had then some conversation with the two *Tseet-kays* (Burman officers sent from *Ava*) regarding the British possessions, power and resources, of every thing regarding which they are in utter ignorance. The Tso-boa himself scarcely opened his lips;—my visit lasted about an hour. The traders exposed their things for sale during the two days we halted here; there was a strong desire to buy on the part of the people, and they sold as much as from the size of the place they had reason to expect. Silver is very scarce and that in circulation is half copper. On the 20th we started for *Monay* and reached *Ban-lome* a small village of 12 or 14 houses in the evening. This is the first village we have seen since leaving their country, the inhabitants of which consider themselves as tolerably safe from the *forrays* of the Kareens, which they all compare to the swoop of a hawk. At *Mok-mai*, though the town may contain 2000 or 2500 people, they dare not go half a mile from the stockade for firewood, and were astonished at the temerity of our mohauts in going singly into the jungle after the elephants. On the following day we reached *Monay*.

The first days' march from *Kudoo* is rugged, mountainous and difficult with no water (except one small stream) till the end of the march, when we cross the *May-neum* about three feet and a half deep. The two following days to *Ban-hat* is a good deal along the bed of a small stream; the road rugged but no hills to cross; water abundant. The next day to *Mok-mai*, which lies quite out of the direct line of march by this route to *Monay*, is over the same range of hills crossed the day of leaving *Kudoo*, but lower. Leaving the *May-ting* deep nearly four feet at *Ban-hat*, and encamping again on the *May-neum*. At *Mok-mai* there is a good deal of cattle, and cultivation round *Ban-hat* and *Mok-mai*, the rest of the country rocky mountains covered with jungle. The last two days the road was better, in many places practicable for carts, water plentiful and a great deal of cultivation near *Monay*.

The Tso-boa of *Mok-mai* furnished me with a guide who had authority to order the Thoo-gyee of *Ban-lome* to relieve him and furnish one who should accompany us to the confines of the *Mok-mai* territory where people would probably be sent from *Monay* to meet us. The *Ban-lome* Thoo-gyee was not to be found in the morning, and we proceeded without him. On reaching *Monay* we were obliged to inquire our way to the place that had been recommended as encamping ground by our guide from *Mok-mai*; no one was inclined to give any information, and it was not till after many inquiries we met one man civil enough to point it out to us. We had scarcely halted when we were surrounded by some hundreds of people, and the same scene of

shouting, indignity and insult was repeated as at *Mok-mai*. I got the small tent pitched and endeavoured by shutting the windows to escape, but in vain; they held them up and shouted more furiously. I sent the Shan interpreter with some of the most respectable traders to the Tso-boa to report my arrival, the purport of my visit, to complain of my reception, and to request protection from the insults of the mob. They were stopped by the Tseet-kay whose house they had to pass; he questioned them in most overbearing manner as to who they were, where they came from, and what brought them here; they endeavoured to satisfy him on all these points and explain the reason the letters were not addressed to him; they asked permission to see the Tso-boa, and requested protection from the mob. He immediately sent out one or two Toung-hmoos and some peons, with ratans which they seemed practised in using, to keep the rabble off the tent. He told my people I should not see the Tso-boa till he was perfectly satisfied with the objects of my visit, said we had no right to come this road, that "BURNEY" was in *Ava*, and if we wished to come we should have gone to *Ava* for permission. After a good deal more in the same strain he concluded by saying—"Well he shall see the Tso-boa to-morrow." In the evening MENG-NAY-MYO-YADZA-NARATA the chief secretary came out to my tent to inquire further the object of my visit, and was much more friendly than I expected from the Tseet-kay-dau's reception of my people. I gave him all the information he wished; he had been a sort of adjutant-general to MAHA-NAY-MYO the general of the Shan troops employed about *Prome* during the late war. After a long conversation we parted very great friends, and he continued to be most friendly and attentive during the whole of my stay. On the following morning he sent for the Shan interpreter and several messages passed regarding my reception by the chiefs. It was proposed I should first go to the *youm* where the lesser officers would be assembled; that I should there take off my shoes and wait till a report was made to the Tseet-kay, when he would send and call me to his house. I objected to the whole arrangement and told them that in *Ava* I never took off my shoes but in the palace, the houses of the princes or at the *Hloot-dau* where I sat on an equality with the Woon-gyees and Atween-woons. I acquainted him that as my letter was to the Tso-boa I should wish to deliver it in person to him; but the Tseet-kay being the higher authority I wished first to see and be guided by him, as you had commissioned me to open a friendly intercourse with this country whoever was at the head of the government. MENG-NAN-MYO returned a message to say he would propose, if I wished it, that I

should see the whole of the military officers and the Tso-boa at once at the *youm*. The fact of my having been in *Ava* at once prevented their saying any thing more about the shoes; to this proposition I immediately acceded as it got over the difficulty of having the letter to the inferior authority, but on sending the Shan interpreter in the evening with my acquiescence, MENG-NAY-MYO was from home. Next day nothing was done. The Tseet-kay said he would consult with the other chiefs and let me know. The following day I sent to learn their determination and was told I should see the Tso-boa and all the military chiefs that day at the *youm*. I consequently took the letter and presents with me. I was not requested to remove my shoes but was obliged to sit with my own coolies, servants, and the people of the town, outside the *Coon-tseen* (a plank about a foot and a half high which separates the centre from the outer part of the house) within which the Tseet-kay-dau-gyee, second Tseet-kay, two Nakans and two Bodhayeas were seated. My friend MENG-NAY-MYO seated himself by me and the Tseet-kay-dau-gyee was seated close to me, separated only by the "*Coon-tseen*." I now begged personally to explain the reason of your having written to the Tso-boa direct, and hoped the mistake would not be allowed to have any weight against our good intentions and wish to strengthen the friendship which had so long existed between the two countries, which was the sole intent of my mission, by opening the nearest route between the British possessions on the coast and this place, &c. &c. I concluded by expressing my wish to deliver the letter in the presence of the assembled officers to its address. The Tseet-kay then took it from me, told me the Tso-boa was not present (I had mistaken the second Tseet-kay for him), and commenced his conversation in a most overbearing strain which he kept up during the whole time it lasted; told me I had no right to come here without an order from the king, through BURNEY at *Ava*, said he was the Bo-hmoo-meng-tha's substitute who represented the king here; he incredulously asked if you did not know the nature of the government here, said I knew nothing and much to the same effect. I told him the treaties of *Yan-da-boo* and *Ava* stipulated for the free passage of traders into all parts of the kingdom: it was with a view to facilitate trade, equally advantageous to both countries or more in their favour, that I had come so toilsome a march, and little expected such a reception. I complained of his having deceived me by the promise of seeing the Tso-boa; he told me the treaty did not say a word about my coming to *Monay* and that he had never said I should see the Tso-boa. I requested that as he had received the Tso-boa's letter, he would give me the permission therein re-

quested to proceed to *Ava* to acquaint Col. BURNEY, for the information of the court of *Ava*, with the result of my endeavours to open the gold and silver road through the *Karian* country. He replied "Oh yes, oh yes, go, go." The whole tenor of his conversation had been most discourteous, and I said I thought the sooner I went the better, and wished to start in two or three days. The first Na-kan then addressed me with much civility and asked if I did not wish to see the Tso-boa; I said most certainly. that had been the original purport of my visit, but that it depended on the "Tseet-kay-dau-gyee" to whom the king had confided the supreme authority here. This seemed to please him, he said "Ah that is a proper answer." The Na-kan again said, "Why you are only just come amongst us and are already talking of leaving us; you must stay with us a little while, it will be necessary to get permission from *Ava* "for you to proceed." I said such was my wish, and that it was with the intent that I should express your wish also to be on the most friendly terms, but as yet I had no reason to believe I was a welcome visitor, and wished to be allowed to proceed without waiting a reference to *Ava* which could only sanction my proceeding, as I dreaded being caught in the rains on account of the people with me having no shelter. The Tseet-kay said sneeringly, "he calls himself 'tsia-woon' (a doctor) and is afraid of dying," of which speech I took no notice.

The Na-kan said I had taken them by surprise, that they had intended me to live in a brick building on the other side of the town. The Tseet-kay interposed and said I might live where I pleased. I asked his advice regarding the best course for traders to take; he said traders had come here before my visit and would continue to do so, that no one prevented them from trading, they might either sell the things where they were, or go to the bazar with them. I repeated my request that if they were satisfied with my intentions, I might see the Tso-boa, and after some conference amongst themselves, it was agreed I should see him at the *youm* on Monday (the next day but one). I requested the Tseet-kay to take charge of the presents which he refused to do, saying they were not for him; told me to take them away and bring them on Monday. I objected to this as dragging them about the town would be disrespectful to you, and told him that they had been brought at his request, which he denied, though the bearer of his message to that effect was at my elbow; he however at last took a list of them and gave them in charge to a "Tyke-tsoe," and, took my leave. In the evening MENG-NAY-MYO who has throughout evinced a kind and conciliatory disposition, came to my tent with

two of the Tseet-kay's sons, probably to see how I was satisfied with my reception. I told him that I had conversed with Burmans of all ranks from the king downwards, and had never been addressed as I had to-day; that it was evidently more to their advantage than ours that trade, which was the greatest source of prosperity to all countries, should be opened between us, that it was a bad return for your friendly intentions, and that if the tenor of the conversation on Monday was the same as it had been to-day, however sorry I might be, I saw no alternative but to return by the route I had come and report my reception to you, when the king would be made acquainted with it. He said this was true, but that he had spoken to the Tseet-kay (with whom he is connected by marriage and had great influence) and assured me I should not again have reason to complain, and begged me to say no more about it: when his visit had lasted about an hour, he took his leave. On Monday I sent the Shan interpreter to the Tseet-kay to remonstrate against being seated outside the "*Coon-tseen*," and to request him to send and to let me know when they were ready to receive me at the *youm*. He was for the first time exceedingly civil, requested him to tell me they were here amongst a people of a different nation from themselves, that the customs were different from those of *Ava*, that the Tso-boa would also be seated outside, and that he would send and let me know when they were ready at the *youm*, which he did at half-past nine, and I proceeded there accompanied by the Meng-nay-myo as before. All the military chiefs were assembled and in half an hour, which was employed in friendly conversation, the Tso-boa with four gold chuttahs, preceded by a guard, arrived and seated himself by me outside the "*Coon-tseen*." He is about 68 years of age, and of the most mild and gentlemanly manners of any Burman I have seen, tall, and fair even for a Shan. I again explained the mistake of the letter and your wishes for a friendly intercourse, and for his and the "Tseet-kay's" protection and assistance to our people coming here to trade, promising a continuation of the same encouragement to his people they had hitherto received at *Maulmain*, and regretted we had seen none of them for the last two years. I said you had heard the *Toung-ngoo* road was unsafe to travel, and had dispatched me to open the road through the *Ka-reen-nee* country, which I had succeeded in doing, and hoped the intercourse would now be uninterrupted. I delivered the letter which the "Tseet-kay" had returned me, and a list of the presents was read, and they were laid before him: he replied that it was well, that he was glad to see me, but as he was subject to *Ava*, the letter and presents must be sent there; and I must

wait till permission for me to proceed was obtained from thence, which he thought would be the best course for us all as he could not take on himself to allow me to go on. I remonstrated with all the arguments I could think of against such a delay, but without success. The conversation then became general, principally on geography, the relative power of different states, and the difference of European and Burman customs, on all of which subjects except the last they are profoundly ignorant. The whole interview was conducted in the most friendly manner, and it was difficult to believe the Tseet-kay to be the same person whom I had met here only two days before. On the following day a report was made of my arrival here, the number of people and amount of merchandize to the "Hloot-dau" at *Ava*. The letter and presents were forwarded to the king and an answer expected in 20 days. I embraced the opportunity to write to the resident a short account of my route so far, and complained of my reception. On the 1st of March I waited on the Tseet-kay at his own house, and used all my endeavours to remove any remaining suspicions he might entertain as to the motive of my visit, and I have every reason to believe I was perfectly successful. He promised every facility to our people trading; said they had better expose some of their things at our encampment where they had a large double zeyat; send some of their people about the town with others, and on market days, which were held every fifth day at one or other of the surrounding villages, they could carry a portion of them out. He promised that there should be no duty levied this time, but probably in future he should be ordered to stamp the goods and levy 10 per cent. as at *Rangoon*. I reminded him of the difference of land and water carriage, the difficulty of the road and great advantage to the purchaser in point of price, &c. He promised in case it was proposed, to use his influence to prevent so heavy a charge. There was a good deal of conversation on other subjects and my visit was altogether satisfactory, my reception civil, kind and conciliatory. I had once to complain of one of the Bhodayea's interfering with the "Poe-zas" (shroffs) which only required mentioning to be redressed, and from this time our intercourse was frequent and most friendly.

On the following day I had a very civil message from the Tso-boa, expressive of his happiness at my visit, and wished to be hospitable, but from my not having brought any letter to the military chiefs he could not be so much so as he wished. He sent me five baskets of rice and forty-eight tickals of coarse silver for my expences, which I was obliged to accept. He wished me to move into the town, but on look-

at the place he intended for me I told him I preferred remaining where I was, and he had huts built for my people near my tent. The traders were in a large zeyat 50 or 60 yards off. Between this day and the 25th I called on all the officers who had met me at the *youm*, and my reception by all of them was civil and friendly.

With the exception of the Tseet-kay and Meng-nay-myo, whose houses are large and commodious, they are worse lodged than the native officers in *Maulmain* and *Tavoy*, or indeed than some of the Thoogyees of our villages. I applied once again through MENG-NAY-MYO to the Tseet-kay to see the Tso-boa, if he saw no objection; he gave an evasive answer and as my visit was not returned by any of the officers except MENG-NAY-MYO, my visits were necessarily confined to the Tseet-kay (whom I saw frequently) and him, at his house. I met amongst others the Tseet-kay of Kiang Tung, and some Shan officers of that town who had been sent by the Tso-boa last year, and endeavoured to open a communication with *Maulmain*; but after being detained nine months at *Zimmay* and treated with neglect by the Chow Houa of that place they were refused permission to pass through the *Zimmay* territory. They expressed themselves much delighted at the mission of Lieut. MCLEOD. They were on their way to *Ava* with the gold and silver flowers forming annual tribute, and we ultimately entered *Ava* together. On the 8th March we heard the first report of the prince SARAWATTIE's rebellion. It was brought from *Ava* in six days by special messenger; it was stated that his quarrel was entirely with the queen's brother. The Tseet-kay was desired to keep the country quiet, as it was likely every thing would be settled in a few days by the prince's capture. The impression of the non-official people I conversed with was, from the first, that unless the queen's brother was given up to him he would have both the power and inclination to take him by force, and the wishes of the people were all in his favour.

The second Bodhayea sent his brother to request me to make his house my own and come and see him frequently, to which I objected as he had not returned my first visit, which accords with the Burman custom, as well as with ours; and they are the last people in the world to whom concessions of this kind can be made. He communicated my message to his brother, who said I was right, and that he would speak to the Tseet-kay on the subject, which he did, and we afterwards repeatedly exchanged visits. Some of the town people came almost daily to my tent; amongst others some Chinamen, residents here, whom I urged to press their countrymen to push on to *Maulmain*; they told me that three or four of them had gone this year to see the state of

the *Maulmain* market, and if a favourable report was made we might expect to see more of them next year. On the 25th I was sent for by the Tseet-kay to the *youm* where I found all the officers assembled. Dispatches had been received from *Ava* containing amongst other things my leave to proceed, orders that I should be treated with attention: a suitable guard given for my protection should I wish to go on in the present unsettled state of the country, and I believe orders also, that I should be allowed to visit the Tso-boa. I received letters from Col. BURNEY giving an account of the dreadfully disturbed state of the country, and stating that if the present king should surround *Ava*, which was more than probable, he should be obliged to remove the residency to *Rangoon*; under these circumstances he left it to my own discretion whether I would come on or return by the way I came. Next morning I called on the Tseet-kay and intimated my determination to proceed, leaving the merchants, whose property would have ensured our being plundered, to his care; he told me the Shan countries through which my march lay till within four or five days of *Ava*, were still quiet, but that below the pass I should find every village a nest of robbers, and the road very unsafe. He promised to furnish me with a guard of 20 or 30 men, and some coolies to assist my own to enable us to proceed with greater dispatch, but strongly advised me to return by the way I had come. As I had however determined to proceed, he begged me to put off my departure for a few days; that the party with the tribute from MENG-LEN-GYEE had crossed the *Thalween* and were daily expected, and on their arrival I could go in company with them and the *Kiang-tung* people, who only waited for them; our party would then amount to three or four hundred men, the guard with which added to mine would ensure our safety. In the meantime it was determined I should call on the Tso-boa on the following morning, which I did in company with MENG-NAY-MYO. His palace which is within a wooden sort of stockade, is of considerable size with a gilt spire of five roofs, surmounted by a "*Tee*" or umbrella, as in the palace at *Ava*. The audience hall is large and splendidly gilded about the throne, on which were placed the "*Meng-hmeauk-ta-ra-nga-bah*" (five ensigns of royalty), and on each side a white umbrella. He was seated at the edge of the raised floor on which it stands; his son and son-in-law were seated on each side a little in front, and below; I had a seat placed between them. The officers and people about were seated behind me on the floor; my reception was most kind and friendly—he expressed his happiness at my visit and his wish to encourage intercourse, but was so perfectly dependent on *Ava* that he could only act

on orders from thence. My audience lasted about an hour and a half, and when I left him he gave in return for the presents I had brought him, a pair of grey ponies.

On the 30th March I called on the Tseet-kay. As nothing had been heard of the MENG-LEN-GYEE party I urged my immediate departure, as in case of being stopped by the robber chiefs on the way to *Ava* and obliged to return by the way we came, we should be thrown into the rains; some of the hills between the *Thalween* and MENG-LEN-GYEE would be nearly impassable, and the jungles there at that season are so unhealthy that on my last mission out of between fifty and sixty people, myself and two others only escaped fever either on the road or after our return. He begged me not to suppose he wished to throw any obstacles in my way, but advised me again to return by the road I had come; as my mind was made up to go on, he wished me to wait till the fifth or sixth of next month, when a part of the Shan contingent of troops furnished by the Tso-boa are to march on to *Ava*, (the son of the late Yea-woon of *Rangoon* having come in six days from the capital with an order to that effect,) and with that force we should be too powerful for any of the parties on the road.

On the 2nd of April I received the Tso-boa's letter, but as there was a paragraph stating that in future, traders should not come here without a pass from *Ava*, I waited on the Tseet-kay with the treaty of *Ava*, and pointed out that by the first article of that treaty, which an order of the king could not do away with, British subjects had a right to trade to any part of the empire. He immediately promised that it should be altered as it had been written in misconstruction of the orders from *Ava*, to which Col. BURNEY had agreed, that no officer should enter the kingdom in this direction without leave first obtained from *Ava*. He informed me that orders had come to day for the Tso-boa to proceed in person with 1,500 men.

On the 3rd I called on the Tso-boa. There is a decided disinclination for the service. He has however determined to leave this on the 6th, expressing himself pleased with the arrangement of my accompanying him, and promising all the assistance in his power on the road. Some of the most adventurous of the traders had determined to accompany me; I however dissuaded them and desired them to remain together. On the 5th when I called on the Tseet-kay to take leave, I took the chief of the traders with me and recommended him to his care, which he promised and we parted good friends. He made a speech which he intended for a sort of an apology for his first reception of me, and hoped he should see me here again.

On the 6th I started for *Ava* after a detention at *Monay* of forty-two days. We halted the first day at a small nullah sbout two miles from *Monay*, and in the afternoon the Tso-boa came out with his men to some zeyats and pagodas about half a mile nearer the town. MENG-NAY-MYO accompanied me to the halting-place, and the Tso-boa's son, the Tso-boa, Tseet-kay and the second Bodhayea visited me in the evening.

On the 7th we made a march of twelve miles to *Hay peck:* some of the troops marched long before day-light: the Tso-boa passed my tent about six o'clock, and at seven I followed and reached the ground at half-past eleven. A square of low sheds had been erected for the troops, huts for the Tso-boa and his immediate followers in the centre, and a spot was pointed out to me to the westward of the enclosure for pitching the tents; boughs were furnished for the elephants and grass for the horses; the troops continued dropping in ten or twelve at a time till dark, they are said to amount to 1000 men, one-half armed with muskets the other with spears. In case of an attack, many of the muskets must prove nearly as dangerous to themselves as to the enemy. The few who can muster horses are allowed to ride, altogether without order and mixed with the infantry. Each foot soldier also carries over his shoulder two cowrie baskets, and his musket or spear tied to the bearing pole. They march without order, firing off their muskets occasionally along the whole line of the march: all their provisions and ammunition must be carried in their cowrie baskets, as except a few coolies of the Tso-boa's, and one or two other chiefs, there are no carriers with the force. I visited the Tso-boa in the evening. In this way we marched till the 16th April, through a hilly undulating country, the long faces of the undulations sweeping away almost as smooth as the surface of a snow wreath, with small abrupt rugged rocky hills and ranges projecting as it were through them to a height of from 20 to 150 feet or more; the soil exceedingly poor, almost bare of trees or brushwood, much of it brought under cultivation for dry grain, though the population is scanty. We passed one or two large towns, and the *Pon* and *Borathat* rivers about three and a half feet deep at this season. The Tso-boa and a part of the force frequently started long before day-light, and the whole was never up till dark. When our encampment lay at a distance from any village the force immediately constructed their sheds of boughs of trees in the same order as on our first encampment, completing the square as they come up.

On the 16th, after daily hearing reports of the most contradictory

and incredible nature, a messenger from his daughter, one of the queens, reached the Tso-boa. He stated that the prince of *Sarawattie* had taken *Ava* without resistance, and put to death three or four of those most inimical to him; put all the ministers of the old government in irons, and degraded the queen and turned her out of the palace. The Tso-boa is ordered to return to *Monay* and wait for orders to approach the capital, and as all the Tso-boas will probably be called on to bring their congratulations and presents to the new government, he expects to be at this halting-place again in a month. The whole country between this and *Ava* is in the possession of bands of robbers from 100 to 150 in number, and all communication even between one village and another is stopped. The Tsoboa's messengers though wearing the prince's badge, were stripped of every article even to their patsos or cloths. I called on the Tso-boa late in the evening, he was very anxious that I should return with him to *Monay*, where the acquaintance we had formed on the march would give him a plea for paying me more attention than he had ventured to do whilst at *Monay* before. As I was now so near the end of a long and toilsome march I objected to return; begged him either to send a party strong enough for my protection with me, according to the orders of the late government, or leave me with the Tso-boa of *Neaung Eue* who is one march in advance of us with 500 men, and is to retreat on this place to-day, and return to *Neaung Eue* about 15 miles from this to-morrow. As the government had been changed he reasonably enough objected to sending a party, but agreed I should remain with the *Neaung Eue* Tso-boa, to whom he would introduce me; either till I received an answer to a letter I had just delivered him for Col. BURNEY, or till he should repass this way for *Ava*, when he would send to *Neaung Eue*, and we could again proceed together. About midnight an officer came to the tent and told me he had been desired by the *Neaung Eue* Tso-boa to wait on me to know at what time I would start, as he was appointed to shew me the way to *Neaung Eue* to-morrow, and that the Tso-boa had desired him to say, at the request of his elder brother of *Monay*, he should be happy to shew me every attention. At day-light on the 17th the *Monay* troops commenced their retreat by a road lying a little north of the one we had come by, and soon afterwards my guide having made his appearance, I started for *Neaung Eue*, where I arrived the same night.

I called on all the influential people; viz. the Tso-boa, his two brothers and his son. The brothers returned my visit and sent me several civil messages. They and the Tso-boa also were civil when-

ever I called, but on the whole there was little cordiality in my reception; perhaps the uncertainty regarding the views of the new government were enough to account for this, and we had no communication with the capital for upwards of three weeks. The principality of *Neaung-eue* or *Neaung Sheway*, though reduced within very narrow limits, was at no distant period one of the largest of the nine Tso-boa-ships; the extensive territory of *Laygea* lately elevated to that dignity formed a part of it. The present Tso-boa, a dull, heavy, vulgar-looking man of about 45 years of age, has been the cause of much distress and misery to the people by a feud of two years with his uncle, during which there were repeated battles fought in the sequestered corners of this valley, and about the banks of a famous and very beautiful lake which occupies about 40 square miles of its southern extremity; he at last succeeded in defeating him (his uncle); but the population of the district was much reduced by emigration of many of the inhabitants to districts a little less harrassed: for they are seldom perfectly quiet. He was involved in debt by the bribes he was obliged to make at court to procure his investiture; to liquidate which he has ever since exercised a system of extortion on the people which has rendered him very unpopular.

On the 13th of May after an anxious detention of a month I received the expected order from *Ava*, authorizing me to proceed, and a suitable guard to be furnished me, which the resident had obtained with difficulty after several days' discussion with the new government, (during which the king first intimated his determination not to abide by the treaty of *Yan-da-boo* or *Ava)*; the order had been sent through head-quarters at *Monay*, and as the party from *Keintaung* with the annual tribute was expected to reach *Pochla* (which is one long day's march from this) in four or five days after the order would reach me, the Tseet-kay sent a message by the people who brought it, advising me to join them at that place, when we should form a party of nearly 200 people, and strong enough to bid defiance to any of the marauding parties which still infested the road. On the morning of the 18th, I left *Neaung-eue*, but owing to the unmanageableness of one of the elephants and the loss of two of our horses, I did not reach *Pochla* till next night, where we found the Shans had arrived in the morning. The following day continued our march for *Ava*. On the 23rd at the village of *Yea-guan* we met the *Shoe-hlan-bo* who has been appointed governor of the Shan countries under the new government, in the room of Meng-myat-boo the king's brother; as his is the supreme authority now throughout the whole country from *Nat-tike* to *Kein-young-gyee*,

I halted here one day to have an interview with him, and endeavoured to procure his interest in favor of a free communication with the provinces. My reception was civil, and he professed himself an advocate for the freedom of intercourse now commenced. At his earnest request I sold him one of the elephants. My visit lasted about an hour, and at parting he gave me a *Patsoe*. On the 25th we descended the *Nat-tike* pass, the longest and most laborious pass in the Burman dominions, or that is known to exist in any of the neighbouring countries. The foot of this pass opens into the valley of the *Irrawaddie*, called the *Lap-dau* or royal fields, a dead level which reaches, at this end where it is narrowest, to the *Tset-kyne* hills at *Ava*. A little more to the southward it runs still further west to the hills on the frontier between *Ava* and *Monepoor*. The descent raised the themometer 12 or 14°. From this to the capital had been, and still was at the time of our passing, one scene of pillage and robbery; and I had much difficulty in getting the Shans to start before day-light, which was now necessary from the heat, though I believe our party was numerically strong enough to frighten any of the bands of robbers; however in point of fact it was almost defenceless from the order or disorder of our march, and the difficulty of getting at any ammunition beyond what the guard might have in their muskets. We however crossed the plain in four days and reached *Ava* on the 28th of May without molestation. The nature of the country from *Neaung-eue* to the top of the *Nat-tike* pass is a good deal of the same character as from *Monay* to *Neaung-eue*. The road may be in some places a little better and the population a little more numerous. From the bottom of the pass to *Ava* though the soil is not rich it is well watered by several large streams, and being nearly level it is favorable to irrigation, and is as well peopled as any part of the kingdom, except the angle between the junction of the *Kin-dween* and *Irrawaddie*. The road all the way from *Monay* to *Ava*, with the exception of the pass, is very tolerable and well frequented. On the following day I waited on the king with the resident and his assistant. As there was no business transacted this day, he was affable and pleasant. He bought my remaining elephants at prime cost, and presented each of us with a small ruby ring, the first he had become possessed of since his seizing the throne. I remained in *Ava* till the 17th of June when I left with the resident, his assistant, and all the *American* missionaries whom the king had prohibited from continuing their labours. From the strength of the monsoon our passage down the river was tedious and we did not reach *Rangoon* till the 6th of July.

III.—*Comparison of Indo-Chinese Languages, by the Rev.* N. BROWN, *American Missionary stationed at Sadiyá at the north-eastern extremity of Assám.*

Considerable time has elapsed since a proposal was made through the *Christian Observer* for collecting short vocabularies of all the languages between India and China. In pursuance of the plan then proposed, have been received, through the kindness of several literary gentlemen, vocabularies of *twenty-seven* languages, specimens of which are prepared for insertion in the periodical above named; but as the subject is equally interesting to the general student and philologist as to the missionary, I have thought a copy of the paper would not prove unacceptable to your pages*. For *twelve* of these vocabularies, viz. the *Manipurí*, *Songpú*, *Kupwí*, *Koreng*, *Marám*, *Champhung*, *Luhuppa*, *Northern*, *Central* and *Southern Tángkhul*, *Khoibú*, and *Maring*, I am indebted to the indefatigable exertions of Capt. GORDON, Political Agent at Manipur, author of the Manipurí Dictionary; to the Rev. C. GUTZLAFF for vocabularies of the *Anamese*, *Japanese* and *Corean*; to the Rev. J. I. JONES, Bankok, for that of the *Siamese*; for the *Gáro*, to Mr. J. STRONG, Sub-Assistant to the Governor General's Agent for A'sám, and to Rev. J. RAE, of Gowahátí, for the *A'ká*. Most of the remaining languages given in the table have been written down from the pronunciation of natives residing in the neighbourhood of Sadiyá.

Although I have as yet received vocabularies of but a small portion of the languages originally contemplated, I have thought it advisable to give specimens of such as have been obtained, hoping that others may be induced to extend the comparison by publishing specimens of other languages†. The names selected are those of the most common objects, and may therefore be regarded as the earliest terms in every language, and such as were least liable to be supplanted by foreign words.

The words given in the table are written according to the Romanizing system; and although there may be some slight variations in the sounds of particular letters, in consequence of the vocabularies having been made out by different persons, yet it is believed they will be found sufficiently uniform for all the purposes of general comparison.

I now proceed to give such remarks upon the several languages contained in the table, as have been furnished by the individuals engaged in compiling the vocabularies.

* We need not assure the author, to whose studies we have already been more than once indebted, how acceptable the comparison he has undertaken is to our own pages; but it may encourage his inquiries and stimulate his zeal to hear that every letter from Paris, where philology seems to have now the most successful cultivation, presses this very object upon our notice.—ED.

† Mr. TREVELYAN has kindly favoured us with copies of the printed vocabulary, which we shall lose no time in forwarding to those interested in this train of research, especially to obtain lists of the hill dialects of all parts of India.—ED.

I.—*Bangáli* and *A'sámese*. These languages being derived from the *Sanskrit*, possess a close affinity to each other. It appears from the table that above six-tenths of the most common words are identical, except with slight variations of pronunciation. The most important of these are the substitution of *s*, in A'sámese, for the Sanskrit *ch*, and a guttural *h* for the Sanskrit *s* and *sh*. The vowels have also undergone considerable variations. The grammatical peculiarities of the two languages are considerably unlike. In the inflection of nouns and verbs, they both bear a strong resemblance to the Latin and Greek languages, with which they have a large number of words in common. The numerals are evidently derived from the same source with the Greek.

The *A'sámese* possesses six cases of nouns corresponding to those of the Latin, to which may be added a seventh, or *Locative* case, expressed in English by the prepositions *at* or *in*. The terminations of the cases are as follows:

Singular.		*Plural.*
Nom.		*Nom.* hont,—bilák, or bur.
Gen.	r.	*Gen.* hontor,—bilákor, &c.
Dat.	lui.	*Dat.* hontolui.
Acc.	k.	*Acc.* hontok.
Voc. as the *Nom.*		*Voc.* as the *Nom.*
Abl.	re.	*Abl.* hontore.
Loc.	t.	*Loc.* hontot.

A peculiar feature of the Asámese is the use of two pronouns for the second person, according as the person addressed is superior or inferior to the speaker. This distinction is also marked by a different termination of the verb, thus:

	Singular.	
First person,	Moi márun,	I strike.
Sec. person,	Toi máro,	Thou strikest.
Do. (honorific,)	Túmi márá,	You strike.
Third person,	Hí máre,	He strikes.
	Plural.	
First person,	A'mi márun,	We strike.
Sec. person,	Tohont máro,	You strike.
Do. (honorific,)	Tumulák márá,	Ye strike.
Third person,	Hihonte, or hibiláke, máre,	They strike.

From this specimen, it may be seen that the verb undergoes no alteration on account of number.

Adjectives, in Asámese, have no declension, nor are they varied to denote the degrees of comparison. These are expressed by means of the suffix kui, *than*, added to the locative case of nouns; as, látkui dángor, *great* [er] *than this*; ataitkui dángor, *great* [er] *than all*, i. e. *the greatest*. The same particle is also used in changing adjectives to adverbs, like the syllable *ly*, in English; thus, khor, *swift*; khorkui, *swiftly*.

Nouns, in whatever case, almost invariably *precede* the verbs with which

they are connected. From the variety of cases, it will readily be inferred that the use of prepositions, or particles having the force of prepositions, is seldom required. When such particles are used, they must invariably *follow* the nouns which they govern. The genitive case always precedes the noun by which it is governed.

II.—*Siamese, Khamti, and other branches of the Tai.* We have seen that the Bangáli and Asámese, in their grammatical forms, bear a close resemblance to the family of European languages. We come now to a class of monosyllabic languages evidently belonging to the Chinese stock. In these languages the nouns and verbs uniformly consist (except where foreign terms have been introduced), of monosyllabic roots, which undergo no change on account of case, mood or tense. These accidents are expressed by means of particles, generally following, but in some cases preceding, the nouns or verbs which they modify. A striking peculiarity, which, so far as we have had opportunity to examine, extends to all monosyllabic languages, is the variety of *intonations*, by which sounds organically the same are made to express entirely different meanings. The first division of tones is into the *rising* and *falling*, according as the voice slides up or down during the enunciation of a syllable. This variety of tone is employed, in English, mostly for the purposes of emphasis and euphony; but in Tai, Chinese, Barmese, &c. such a variation of tone produces different words, and expresses totally different ideas. Thus in Tai, má signifies *a dog*, m̲á (the stroke under the m denoting the falling tone) signifies *to come*. In Barmese, lé is *air* but l̲é is a *bow*; myen is the verb *to see*, while m̲yen denotes a *horse*.

Another distinction of tone, which obtains nearly or quite universally, in monosyllabic languages, is the *abrupt termination*, or a sudden cessation of voice at the end of a syllable. This is denoted by a dot under the final letter. Like the other variations of tone, it entirely changes the meaning of the words to which it is applied. Thus, taking for illustration the syllables above mentioned, má. in Tai, signifies a *horse*; in Barmese, l̤é signifies *to be acquainted with*; m̤yeṇ, *high*.

These two varieties of intonation are the most extensive and important; but several languages of the Chinese family make still more minute distinctions. The Chinese language itself is said to distinguish eight different tones; the Tai possesses five or six; the Karen an equal number; the Barmese only three, viz. the rising, falling, and abrupt.

The *Siamese*, *Láos*, *Shyán*, *Khamti* and *Ahom*, are all merely dialects of the same original language, which is called Tai; and prevails through a wide tract of country, extending from Siam to the valley of the Brahmaputra. I have inserted in the table specimens of the Khamti and Siamese, spoken at the two extremities, between which the difference will naturally be greater than between the dialects spoken at any of the intermediate stations. Yet we find that upwards of nine-tenths of the fundamental words in these two dialects are the same, with but slight variations in the pronunciation. These variations are mostly confined to a few letters, viz.

ch, which the northern tribes change to *ts*; *d*, for which they use *l* or *n*; *r*, which becomes *h*; and *ua*, which they exchange for long *ó*.

Different systems of writing have been introduced to express the sounds of the *Tai*; the Khamtí and Shyán alphabets are evidently derived from the Barmese; the Láos is nearly related to the Barmese, but more complete and better adapted to the wants of the language than the Shyán; while the Siamese character bears only a remote resemblance to the Barmese.

All the dialects of the *Tai* have nearly the same grammatical construction. The arrangement of words in sentences is, for the most part, as in English; unlike other eastern laguages, where the words are generally placed in an inverted order. The nominative precedes the verb; the verb usually precedes the objective. Prepositions always precede the nouns which they govern. The possessive case follows the noun by which it is governed, as mü man, the *hand* [of] *him*, i. e. *his hand*. Adjectives follow the nouns which they qualify.

A striking feature in many eastern languages both monosyllabic and polysyllabic, is the use of *numeral affixes*, or, as they have sometimes been called, *generic particles*. These particles are affixed to numeral adjectives, and serve to point out the genus to which the preceding substantive belongs. Thus in Tai, the expression for *two elephants* would be, tsáng song tó, *elephants two bodies*. When the number is *one*, the generic particle *precedes* the numeral, as tsáng tó nüng, *one elephant*. In Barmese, the generic particles invariably follow the numerals, as lú ta-yauk, *man one person*; lú nhi-yauk, *men two persons*, i. e. *two men*.

III.—*A'ká* and *A'bor*. These languages have been but partially examined; it is evident, however, from the table, that they are closely allied to each other, nearly half the words being found alike in both. One-fifth of the words agree with the Mishimí; and a considerable number with the Barmese, Singpho and Manipur.

The *A'bors* occupy the lofty ranges of mountains on each side the river *Diháng*, or *Tsámpú*, and are probably very numerous. The *Miri* is a dialect of this language, which is spoken by the people of the plains; but is said not to be essentially different from the language of the highlands.

IV.—*Mishimí*. This language is spoken by the inhabitants of the mountainous regions on the river *Dibáng*, east of the *A*bor country. Little is known of them. There are three principal tribes, the *Mdí Mishimís*, the *Taron* or *Digárú Mishimís*, and the *Maiyí* or *Meme Mishimís*. Their language is substantially the same. It is distinguished by several very peculiar tones, and some of its consonants are extremely difficult of enunciation. In this respect it differs from the *A*bor, the sounds of which are easy and flowing.

V.—*Barmese*. This language is originally monosyllabic, although it now contains many polysyllabic words. These are mostly terms belonging to their religion, which have been introduced from the *Páli*, their sacred language. The Barmese delights in the multiplication of synonymous

words, which follow each other in close succession and serve to render many terms definite which would otherwise be ambiguous. Páli words are generally followed by their synonyms in the vulgar tongue. Thus the usual expression for *earth* is *pathawí myégyí ; myegyí* (great earth) being the vulgar term, and *pathawí* the Páli or Sanskrit.

The order of arrangement in Barmese is almost directly the reverse of the English. As an example of this, take the following sentence: *He said, I am the voice of one crying, make straight in the wilderness the way of the Lord, as said the prophet Esaias.* The verse in Barman stands thus: *The prophet Esaias said as, The-Lord of the-way the-wilderness in straight make, crying one of the-voice I am, he said.*

In Barmese, the affixes to nouns, verbs and numerals, are very abundant, many of them merely euphonic. Great attention has been paid to euphony in the formation and cultivation of this language. This is particularly seen in the change of the hard consonants, *k, p, s, t,* to the corresponding soft letters, *g, b, z,* and *d.* Thus E'ráwati (the river) is invariably pronounced *E'ráwadi,* though written with a *t ; Gotama* (their deity) is pronounced *Godama,* &c. All the affixes, whether of verbs, nouns, or numerals, beginning with a sharp consonant, universally exchange it for a soft one, except where the verb or noun itself ends in a sharp consonant, in which case euphony requires that the affix should begin with a sharp, as the enunciation of a flat and sharp together is peculiarly harsh and difficult. We also trace this principle in the Manipurí language, where the verbal affix is *ba,* unless the verb ends in one of the sharp consonants *k, t,* or *p,* when the affix is invariably *pa.* Capt. Gordon does not inform us whether this principle extends to the other affixes in Manipurí, but, from the similarity of the two languages, it seems not improbable that such may be the case.

VI.—*Karen.* I have been disappointed in the hope of obtaining a perfect vocabulary of this language. The few words inserted in the table will, however, give some idea of its affinities. It most resembles the Barmese and Manipurean dialects, though it is essentially different from either. Its tones are five ; the same in number with those of the *Tai.* Several of them, however, appear to be different from those of any other tribe. No final consonants are allowed in Karen.

VII.—*Singpho* and *Jilí.* The Singpho possesses many words in common with the Abor, the Barmese, and the Manipurean dialects. It is the language of extensive tribes, occupying the northern portions of the Barman empire. The intonations are similar to the Barmese, and its grammatical construction is almost precisely the same. It is peculiar for its combinations of consonants, many of which would at first sight appear quite unpronounceable to a European. It doubtless belongs to the monosyllabic stock of languages.

The *Jilís* are a small tribe who formerly occupied the highlands in the northern part of Barmah, but have been driven from their country by the Singphos. The tribe is now nearly extinct. Their language appears to

have been a dialect of the Singpho, seven-tenths of their vocables being found in that language.

VIII.—*Gáro.* For a vocabulary of the language of this singular people we are indebted to Mr. Strong, of Goalpára, who from frequent intercourse with this tribe, has had opportunity to become well acquainted with their language and customs. In the specimen given in the table, the orthography of a few words has been slightly altered, so as to conform to the Romanizing system. The language appears to have considerable relation to the Singpho and Jilí. It is difficult to decide from the specimens before us, whether it is to be ranked with the monosyllabic or polysyllabic languages. It probably belongs to the latter. The Gáros inhabit an extensive range of hills below Gawahátí, and are in a completely savage state. So meagre is their language, that they have not even a term for *horse*, nor do they possess any knowledge of such an animal.

IX.—*Manipurí and neighbouring dialects.* The following very interesting account of the singular variety of languages spoken in the neighbourhood of Manipur, is copied from Capt. Gordon's letter to Mr. Trevelyan.

"I send you specimens of (including the Manipurí) twelve of the numerous languages, or perhaps more properly, as respects many of them, dialects spoken within this territory. On examining Pemberton's map, you will perceive that, beginning in the west with the *Songpú*, (here commonly confounded with the *Kupwí*, a much smaller tribe,) I have, in my course round the valley, reached the parallel of latitude from which I first set out, having described rather more than a semicircle. This is, however, but the inner of the two circles I propose completing, and until I have made some progress in my way round the outer one, I feel that I shall not be able to furnish satisfactory replies to the queries respecting particular tribes.

"In several directions, but more especially in the north-east, I am given to understand the languages are so very numerous, that scarcely two villages are to be found in which they are perfectly similar. This, I apprehend, arises from the propensity to change inherent in all languages, and which, when left to operate unrestrained by the check which letters impose, soon creates gradually increasing differences of dialect amongst a people originally speaking the same language, but who have become disunited, and between whom little intercourse has afterwards subsisted. To the same cause is, I believe, attributed the great diversity of languages and dialects spoken by the aborigines of America, particularly in Brazil, where communities composed each of a small number of families are said to speak languages unintelligible to every tribe around them. Aware of this circumstance as respects a country more favorable to intercourse than the mountainous territory surrounding Manipur, I was not much surprised at finding instances of the same kind in this vicinity. The language spoken in *Champhung* is only understood by the thirty or forty families its inhabitants. The majority can speak more or less of Manipurí, or the languages of their more immediate neighbours; but I am told that there

are individuals who require an interpreter in conversing with persons not of their own very limited community. Dialects so nearly similar as are those of the *Northern* and *Central Tángkhuls*, are generally intelligible to the adult male population on both sides. But the women (the two tribes in question seldom intermarry) and children, who rarely leave their homes, find much difficulty in making themselves understood. Neither of the tribes just named understand the language spoken by the *Southern Tángkhuls*, and that again differs as widely from the languages of the *Khoibús* and *Marings*. The southern Tángkhuls tell me that their language is spoken by the inhabitants of a large village named *Kambí-maring*, situated somewhere to the westward of the northern extremity of the *Kabó* valley. I mention this to show why I as yet do not feel myself competent to give satisfactory replies to the queries concerning particular tribes. I however think I can discover a connection (I do not include the *Tai*) between all of the languages in this quarter that I have yet examined, sufficiently intimate to warrant me in assigning a common origin to the tribes by whom they are spoken. From these tribes, which I imagine to be the aborigines of the country, extending east and south-east from the Brahmaputra to China, I derive both the Barmese and the Manipuris. To the Shyáns, I assign a different origin."

X.—*Anamese* or *Cochin-chinese*. The vocabulary of this language has been furnished by Rev. Mr. GUTZLAFF, from whose letter are extracted the following additional particulars.

"The *Anamese* spoken in *Cochin-china* and *Tunkin* with very little difference, might be considered as a coarse dialect of the Chinese, if the sounds wherewith the characters are read were also current in the spoken language. But the oral dialect totally differs from that used in perusing the books in the Chinese character, and the construction likewise deviates materially. It is however monosyllabic; has intonations and all the characteristics of the Chinese, though the Anamese have fuller sounds, and use various letters and diphthongs which no Chinaman can pronounce correctly. The learning of the natives is entirely confined to Chinese literature, in the acquiring of which they are by no means celebrated. There exist a number of short-hand Chinese characters, which are used as syllabaries to express sounds without reference to their meaning; but they have not yet been reduced to a system, and are used in various ways. The language itself is spoken with a very shrill voice, and appears to a foreigner very uncouth. It bears only a slight resemblance to the Cambodian, but otherwise with no other dialect of the Eastern Peninsula*."

XI.—*Japanese*. Mr. GUTZLAFF says, "This language is spoken with very little variation, by about 20 millions of people, who inhabit the Japanese islands. It is polysyllabic, and only resembles the Chinese so far as it has adopted some words from that language, which are however

* We shall soon know more of this from the Bishop's dictionary, now nearly through the press.—ED.

changed, according to the organs of the natives, like the Latin and Greek words in our tongue. Having numerous inflections and a regular grammar, in a few points resembling the Mántchú, it is easier to express our ideas in it than in the Indo-Chinese languages. The Chinese character is universally read amongst the natives with a different sound and accent, more full and euphonical. For the common business of life, the Japanese use three different syllabaries, the *Katakana*, *Hirakana*, and *Imatskana*, which consist of certain Chinese contracted characters, and amount to 48. From hence it appears that all the radical syllables of the language are no more than 48, which by various combinations form all the words of one of the most copious languages on earth. Its literature is very rich. The Japanese have copied from and improved upon the Chinese, and have also availed themselves of the superiority of our European literature."

XII.—*Corean.* In regard to this language, Mr. GUTZLAFF makes the following remarks.

"*Corea* is little known, and the language still less. The collection of words here inserted was copied from MEDHURST'S VOCABULARY. This nation has likewise adopted the Chinese character, and is in the possession of the same literature; but in point of civilization it is below its teachers. The Coreans have a syllabary of their own, far more intricate than the Japanese, and formed upon the principle of composition. It consists of few and simple strokes, and is not derived from the Chinese character. Fifteen consonants and eleven vowels are the elements, which form 168 combined sounds, the sum total of the syllabary. The influence of the Chinese Government in this country has been far greater than in Japan, and hence the language is far more tinged with the language of Han. There are a very great number of composita, of which the first syllable is native and the last the Chinese synonym, pronounced in the Corean manner. We have not been able to discover any declension, but it is not unlikely that it has a few inflections. Many words resemble the Japanese, and the affinity between these two nations is not doubtful. The language being polysyllabic, does not require any intonation, and if such exist, it has entirely escaped our notice."

I now proceed to give specimens of all the languages and dialects of which vocabularies have been received: to which I shall add a table showing the number of words per cent. which in any two languages agree, or are so similar as to warrant the conclusion that they are derived from the same source. It must be noted that the words are spelled according to the Romanized orthography. The vowels are sounded as follows:—

a as in *America*, woman.	á as in *far*, father.
e ,, men.	é ,, they.
i ,, pin.	í ,, police.
o ,, nor, not.	ó ,, note.
u ,, put.	ú ,, rule.
u̲ ,, *l'une*, (French.)	

The letter h is always used strictly as an aspirate, whether at the beginning of a syllable, or following another consonant. Thus th is sounded as

in priesthood, not as in think ; sh as in mishap, not as in ship : ph as in uphold, not as in philosophy. Th and sh, when used to express their English sounds as in think, ship, are printed in italics. The French nasal n (as in *enfant*) is expressed by n̲, with a dash underneath.

English.	*Bangáli.*	*A'sámese.*	*Khamti.*	*Siamese.*
Air	báyu	botáh	lum	lóm
Ant	pipiliká	póruá	mut	mót
Arrow	tír	kánr	lempün	luk son
Bird	pakhyi	sorai	nók	nók
Blood	rakta	tez	leüt	lüat
Boat	nauká	nau	heü	rüa
Bone	asthi	hár	nük	kra dük
Buffalo	mahish	móh	khwai	khwái
Cat	birál	mekúri	miú	meau
Cow	garu	górú	ngó	ngóa
Crow	kák	kauri	ká	ká
Day	din	din	wan	wan
Dog	kukkur	kúkúr	má	má
Ear	karna	kán	hú	hú
Earth	máti	máti	lang nin	din
Egg	anda	kóni	khai	khai
Elephant	hasti	hátí	tsáng	chháng
Eye	chhakhyuh	sókú	tá	tá
Father	pitá	bupai	po	po
Fire	agni	júi	fai	fai
Fish	matsya	más	pá	plá
Flower	pushpá	phúl	mok	dok mai
Foot	pád, charan	bhóri	tin	tín
Goat	chhágal	shágóli	pe	pe
Hair	kesh, chul	súli	phum	phóm
Hand	hát	hát	mü	mü
Head	mastak	múr	hó	hua
Hog	shúkar	gáhóri	mú	mú
Horn	shringa	hing	khau	khau
Horse	ghórá	ghóiá	má	má
House	ghar	ghor	heün	rüan
Iron	lauha	lu	lék	lek
Leaf	pátá	pát	maü	bai
Light	dípti	pohor	leng	seng
Man	manushya	mánúh	kun	khón
Monkey	bánar	bándor	ling	ling
Moon	chandra	jun	leün	düan
Mother	jananí	ai	me	me
Mountain	parbat	porbot	noi	phu khau
Mouth	mukh	múkh	pák	pák
Musquito	mashá	moh	yúng	yung
Name	nám	nám	tsü	chhü
Night	rátri	ráti	khün	khün
Oil	tail	tel	nam man	nam man
Plantain	kalá	kolá	kué	klui
River	nadí	nói	me nam	me nam
Road	rástá, bát	bát	táng	táng
Salt	laban	lun	kü	klüa
Skin	charma, chhál	shál	nang	nang
Sky	ákásh	ákáh	fá	fá
Snake	shánp	háp	ngú	ngú
Star	tárá	torá	náu	dáu
Stone	prastar	hil	hin	hín
Sun	súrjya	belí	wan	tawan
Tiger	bágh	bágh	seü	süa
Tooth	danta	dánt	khiú	fan
Tree	gáchh	gosh	tun	tón mai
Village	grám	gaun	mán	bán
Water	jal, páni	páni	nam	nam
Yam	álu	álá	hó man	hóa man

English.	*A'ká.*	*A'bor.*	*Mishimí.*	*Burmese.*	*Karen.*
Air	dorí	ásár	árengá	lé	kalí
Ant	tárak	táruk	árüang	payuetseik	taḥríaś
Arrow	apak	epúgh	mpü	myá	——
Bird	putáh	pettáng	tsá	nghet	thó
Blood	oyí	í	harrí	*th*wé	——
Boat	hulung	etká	rruá	lhé	khlí
Bone	sala	álong	rúbóh	ayó	——
Buffalo	mendák	menzek	máji	kyue	páná
Cat	ásá	kedári	nádzári	kyaung	saminyo
Cow	shye	sóu	mátsokrú	nuś	klo
Crow	pák	pivág	tsáklá	kyi	——
Day	húmpáh	longe	kihingge	né	ní
Dog	ekí	ekki	nekó	khwé	tui
Ear	nyárung	nórung	nakrú	ná	naku
Earth	——	ámóng	tarí	myé	khí
Egg	pápúk	rokpi	mtiúmaie	u	——
Elephant	háti	syíte	dátóṇ	shen	kátsho
Eye	nyek	ámig	malam	myetsi	mekhlí
Father	ábba	bábu	nábá	aphé	pá
Fire	ummah	eme	náming	mi	mé
Fish	ngay	engo	tá	ngá	nyá
Flower	pung	ápun	ápü	pánbwen	——
Foot	lágá	ale	mgroh	khyé	khodu
Goat	shabam	soben	mádze	sheik	metele
Hair	demuk	dúmid	thüng	shaben	khósú
Hand	lák	elág	átuá	let	tsu
Head	dumpa	dumpóng	mkúrá	ghaung	khó
Hog	kukpa	éek	bálí	wet	thó
Horn	kung	áreng	rriú	khyo	——
Horse	ghuŕá	buré	garre	myen	káśé
House	ú	ekum	hóṇ	eing	hí
Iron	kakdhar	yogid	sí	*th*án	tá
Leaf	nabar	ánne	náh	yuet	—
Light	hang tepá	púánge	tsonáwo	len	—
Man	bangne	ámi	name	lú	prá
Monkey	lebe	sibie	tamrm	myauk	——
Moon-	pala	polo	haluá	la	la
Mother	ane	náne	náma	amé	mo
Mountain	nodí	adí	thaiyá	taung	kátsa
Mouth	gám	nepáng	takü	nhók, pazát	thákhó
Musquito	tárang	sunggu	tádze	khyen	pátso
Name	——	ámin	amüng	náme	ámi
Night	ia	kámo	iá	nyin, nya	——
Oil	tel	tuláng	suá	shí	só
Plantain	kepák	kopág	phájí	nghetpyo	sákwí
River	subang	botte	tsaló	myit	thimopralo
Road	lamtau	lámbe	ailam	lán	kle
Salt	álla	álo	pláh	shá	iśá
Skin	sapen	ásig	kuá	*th*ayé	——
Sky	áúpá	taling	brrá	mó	múkhó
Snake	tabuk	tábí	tábú	myué	bru
Star	takar	tekár	kádáng	kye	śá
Stone	elung	eling	mplá	kyaukkhe	le
Sun	dahani	árung	wanyí	né	mu
Tiger	samnya	simioh	támyah	kyá	bosá
Tooth	phí	ipáng	llá	*th*wá	——
Tree	sangná	sine	masang	*th*itpen	áthú
Village	nampum	dólung	máting	yuá	wé
Water	issí	ási	máchí	yé	thí
Yam	——	engin	gí	myaukkhaung	nue

English.	*Singpho.*	*Jili.*	*Garo.*	*Manipuri.*	*Songpu.*
Air	mbóng	mbóng	barówá	nungsít	mpoan
Ant	kagin	tsanglang	*sh*ámalchak	kakcheng	nteang
Arrow	palá	malá	brá	tel	lá
Bird	wú	machik	dúbring	úchek	nroi
Blood	sai	tashai	kanchai	í	zyai
Boat	li	talí	ring	hí	hli
Bone	nráng	khamráng	gring	sarú	karau
Buffalo	nga	ngálui	mátmá	iroi	woirhoi
Cat	ngyau	tengyau	menggó	haudong	myauná
Cow	kansú	tangá	macnú	samuk	woitom
Crow	kokhá	takhá	doká	kwák	aghak
Day	siní	taná	sáló	nungthil	kalhán
Dog	kwí	takwí	áchak	hwi	shí
Ear	ná	kaná	náchil	ná	anhúkon
Earth	nggá	taká	hár	laipák	kandí
Egg	wúdi	matí	dúchi	yerum	nroidui
Elephant	magwí	tsáng	mongmá	sámú	woipong
Eye	mi	njú	mokron	mit	mhik
Father	wá	va	áfá	i; á	apú
Fire	wan	tavan	wol	mai	mái
Fish	ngá	tangá	nátok	ngá	khá
Flower	sabanpú	saban	bíbál	lai	mhun
Foot	lagóng	takkhyai	jáchok	khong	phai
Goat	painam	takhyen	dóbak	hameng	zyú
Hair	karú	karú	kiní	sam	sam
Hand	letá	taphán	jak	khut	bán
Head	bóng	nggum	*sh*ikam	kok	pí
Hog	wá	tawak	wok	ok	ghák
Horn	rung	salung	grong	machí	kachai
Horse	kamráng	khamráng	———	sagol	takoan
House	ntá	kim	nók	yim, sang	kái
Iron	mprí	taphí	*sh*el	yot	ntan
Leaf	lap	lap	bolbijak	lá, maná	nhui
Light	thói	thwé	*sh*ingá	ngálba	ghán
Man	simpho	nsang	mande	mi	mai
Monkey	wé	tawé	hármak	yong	akoi
Moon	satá	satá	jájong	thá	bú
Mother	nú	nú	amá	imá	apui
Mountain	bóm	satóng	áchúrá	ching	cheing
Mouth	nggóp	nóng	kósak	chil	mhoang
Musquito	sigrong	pakyók	ganggiá	kang	chakhéng
Name	ming	taming	bimong	ming	kazyan
Night	saná	sanap	wáló	ahing	yimmhang
Oil	namman	namman	tochai	tháu	tháu
Plantain	langó	khungó	tarik	laphoi	háu
River	khá	talau	chimá	túrel	duidái
Road	lam	tanglong	rámá	lampí	chang
Salt	tsúm	chúm	kárasam	thúm	otai
Skin	phi	maphik	bigil	mawul	kagi
Sky	mó	mamó	srigí	nongthaurai-lil [pak	tingpuk nrui
Snake	lapú	tapú	chapí	thawálbichak	ghanchong-
Star	sagan	sakan	ásáke	nung	ntáu [na
Stone	nlóng	talóng	rangta	númit	naimhik
Sun	tsan	katsán	sálgrá	kai	kamhang
Tiger	saróng	kasá	machá	yá	hú, nai
Tree	phún	phún	wágam bolbiphang	úpál	thingbang
Village	mareng	mbat	song	khúl	nham
Water	ntsin	mchin	chí	ising	dui
Yam	nai	nai	tájong	há	rhu

English.	*Kapwi.*	*Koreng.*	*Marám.*	*Champhung.*	*Luhuppa.*
Air	thiráng	tinghun	nhlut	phanrá	masí
Ant	tangin	mateangpwí	nteng	chingkhá	chaling
Arrow	than	takyen	nlá	malú	malá
Bird	masá	nthikna	aroi	ngúthe	vá
Blood	thí	tazyai	azyí	azí	*ashí*
Boat	lí	malí	nlí	marikho	marikhong
Bone	marú	pará	mahú	sorũ	arũ
Buffalo	saloi	alui	aghoi	ngalũi	siloi
Cat	topisá	myauná	tokpá	hángaubí	lámí
Cow	tom	matom	atom	*sh*emuk	simuk
Crow	maá	nget	chaghak	khalé	hangkhá
Day	tamlái	nin	lánlá	ngasinlung	ngasun
Dog	wí	tasí	athí	aval	*thũ*
Ear	kaná	kon	inkon	khunú	khaná
Earth	talai	kadí	n*th*á	ngalai	ngalai
Egg	makatui	pabum	aroighum	ngorí	harũ
Elephant	tapong	chapong	mpong	plobí	mavũ
Eye	mik	mik	mik	amak	mik
Father	apá	apú	apá	íbo	avá
Fire	mai	chamí	mai	amai	mai
Fish	ngá	chakhá	khái	akhai	khái
Flower	rai	charápen	pán	abun	won
Foot	kí	chapi	phai	aphai	phai
Goat	ken	kami	khamí	amũ	me
Hair	sam	tatham	*th*ém	sam	sam
Hand	kut	chaben	ván	apán	páng
Head	lá	chapí	apí	kau	kui
Hog	bok	kabak	wok	avak	hok
Horn	takí	pake	tí	ratsũ	ngachí
Horse	takoan	chakon	chakon	sagol	sikwí
House	in	chakí	kai	arú	*shim*
Iron	thin	chaghí	kaphá	aruk	tin
Leaf	ná	panú	alui	singnú	ná
Light	bán	ben	ghen	wár	hor
Man	mí	chamai	mí	samũ	mí
Monkey	kazyong	tazyong	kazyong	khayo	nayong
Moon	thá	charhú	lhá	asúbí	kacháng
Mother	aná	apwí	apwí	ípe	avũ
Mountain	ching	malong	kalong	kaphung	kaphung
Mouth	mamun	chamun	m*a*thú	khamar	khamor
Musquito	káng	tingkheng	tangkháng	hachang	hachán*g*
Name	ming	pazyan	azyan	amang	ming
Night	zyingphá	nchun	múlá	ngayúlá	ngayá
Oil	thán	thán	thán	———	thánrũ
Plantain	ngachang	ngo*shi*	mphoithai	lípũ	nánú
River	tuikoak	*shinggú*	arunkai	úrai	kong
Road	lampwí	mpwí	lampí	lampí	songvũ
Salt	machí	matai	nchí	kasam	machí
Skin	mun	paghí	taghí	ahul	ahui
Sky	tangbán	tinggem	tinggam	tangaram	kazing
Snake	marun	kanu	sanná	rínam	pharũ
Star	insí	chagan	chaghanthai	harthí	sirvá
Stone	lung	talo	ntau	ngalung	ngalung
Sun	rímik	tingnaimik	tamik	tamak	tsingmik
Tiger	takhú	chakwí	khúbui	akhubí	sangkhú
Tooth	ngá	ahú	aghà	avá	há
Tree	thingkung	singbang	akoi	asing	thingrong
Village	nam	nam	inam	rám, khul	ramkhũ
Water	tui	tadui	a*th*ui	thari	tarũ
Yam	bánrá	charú	charáthai	páthai	lásukpái

English.	*N. Tángkhul.*	*C. Tángkhul.*	*S.Tángkhul.*	*Khoibú.*	*Maring.*
Air	masü	mas*h*ia	khírâng	nonglit	marthí
Ant	lángzá	chamchá	akhau	míling	phayéng
Arrow	malá	malá	the	malá	lá
Bird	atá	otá	mate	wátsá	wáchá
Blood	asü	unsí	athí	hi	hi
Boat	malhü	malhí	rakong	malí	lí
Bone	arükáu	urú	arú	thurú	khrú
Buffalo	*shí*	*shí*	selüi	raloi	lui
Cat	láme	tumí	akhan	tongkan	tung
Cow	samuk	samuk	samuk	namuk	muk
Crow	khungkhá	hongkhá	awák	hatharák	ak
Day	masütum	masung	asün	nongyéng	nunghsng
Dog	phü	wí	ü	wí	wí
Ear	akhaná	okhané	nákor	khaná	nhamil
Earth	malái	ngalái	alü	thalai	klai
Egg	háchü	atü	artü	wáyui	wáyui
Elephant	maphü	sakatai	sái	kasái	sái
Eye	amícha	omít	amit	mit	mit
Father	apá	opá	pá	pá	pápa
Fire	mái	mái	mui	mai	mai
Fish	khí	sangá	ngá	thangá	hngá
Flower	pie	pie	ramen	pár	pár
Foot	akho	okho	ake	wáng	ho
Goat	mí	mikre	makre	hingngau	klang
Hair	kosen	kosen	sam	sam	sam
Hand	akhüi	khut	kuit	khut	hut
Head	akáo	okáo	alú	lú	lú
Hog	hok	hok	ok	hok	wok
Horn	akatsü	mchí	arkí	atsí	chí
Horse	sakoi	sakoi	sapuk	*sh*apuk	puk
House	*shin*	*shin*	yin	tsim	chim
Iron	marü	marí	thiar	sakwá	thir
Leaf	thiná	thiná	thingná	ná	ná
Light	*she*	*shea*	wár	wár	wár
Man	mü	mí	pásá	thamí	hmí
Monkey	nayong	nayong	yong	hayong	yung
Moon	kacheang	kacheang	akha	tanglá	tánglá
Mother	aphü	onú	noá	núbi	tádá
Mountain	kaphung	kaphung	ramthing	ramthing	khlung
Mouth	ania	onia	mur	mur	mur
Musquito	hacheáng	haicheang	sangsan	thangtan	thangkran
Name	amí	omin	armin	ming	ming
Night	mayá	rosá	ayan	rasá	meá
Oil	tháu	tháu	tháu	*sh*erek	thrik
Plantain	mottnái	motthai	müt	mothai	muthai
River	kong	tütháu	tü	kongpwí	tulil
Road	somphü	sombüi	lampü	lampwi	lam
Salt	ntsü	machí	machí	miti	tí
Skin	ahü	ohoi	arhün	un	wun
Sky	kazíráng	kachíráng	arwállong	thangwán	nungthau
Snake	phrü	phrüi	marí	phurun	phrul
Star	sapáchenglá	sapáchenglá	ar*sh*i	tikron	sorwá
Stone	lunggau	lung	lung	thullung	khlung
Sun	yimit	ohimit	aní	nongmit	nungmit
Tiger	sakhwü	sakwi	hampü	hompwí	humwi
Tooth	ahá	ohá	alárrá	há	há
Tree	thingbáng	thingbáng	thing	hingtong	hingbál
Village	rahang	ram, khui	ram	yon	yul
Water	aichü	tündü	tü	yui	yui
Yam	berhá	berhá	wirá	rá	bál

English.	*Anamese.*	*Japanese.*	*Corean.*
Air	hoi	djiyu	siyo
Ant	kien	ari	kayami
Arrow	ten	ya	sar
Bird	shim	tori	sai
Blood	mau	tsū	phi
Boat	ding	tenmá	syosyon
Bone	shūng	hone	spyo
Buffalo	klongnūk	suigiu	mursyo
Cat	meyū	neko	koi
Cow	sūngkrau	ushi	syo
Crow	konkwa	karasze	kamakoi
Day	ngai	hi	narir
Dog	sho	inu	kai
Ear	tái	nimi	kúi
Earth	det	tsi	tati
Egg	krūng	tamango	ar
Elephant	wói	dso	khokhiri
Eye	mat	me	nún
Father	*shá*	tsitsi	api
Fire	lūa	hi	púr
Fish	kha	sakana	koki
Flower	hoa ıū	hana	kot
Foot	kangshūn	asi	par
Goat	yé	hitszeji	yang
Hair	long	kaminoke	thorok
Hand	tai	te	son
Head	dú	atama	mari
Hog	héu	inoshishi	santsey
Horn	sūng	tsno	spúr
Horse	ngūa	ma	mar
House	ya	uchi	tsipka
Iron	sat	tets	tsurir
Leaf	la	namari	nip
Light	raangsang	hikari	piyot
Man	ngoe	stonin	saram
Monkey	wūn	saru	tsainnapi
Moon	klang	ski	tarwor
Mother	me	haha	omi
Mountain	yam	yama	moismuni
Mouth	meng	kuchi	ipku
Musquito	bang	ka	mokúi
Name	ten	na	irhom
Night	dem	yoru	pamya
Oil	yau	abura	kirúm
Plantain	kongtin	obako	phatshyo
River	som	kawa	hasyu
Road	dang	mitchi	kin
Salt	moe man	shiwo	sokom
Skin	yá	kawa	katsok
Sky	tūngtien	sora	hanar
Snake	ran	kuchinawa	paiyam
Star	tingto	hoshi	pyor
Stone	da	ishi	torsyok
Sun	witaiyūng	nitchirin	nar
Tiger	ongkop	tora	pom
Tooth	nanrang	ha	ni
Tree	kai	ki	namo
Village	lang	mura	suikor
Water	nūk	midzu	mursyu
Yam	kwei	skunemo	ma

RESULTS OF COMPARISON,

Shewing the proportion of words in 100, which, in any two of the languages mentioned below, are found to be the same, or so nearly alike as to authorize the conclusion that they are derived from a common source.

	Bangáli,	Asámese,	Khamtí,	Siamese,	Áká,	Abor,	Mishmí,	Barmese,	Karen,	Singpho,	Jili,	Gáro,	Manipuri,	Songpú,	Kapwi,	Koreng,	Marám,	Champhung,	Luhuppa,	N. Tángkhul	C. Tángkhul,	S. Tángkhul,	Khoibá,	Maring,	Anamese,	Japanese,	Corean,
Bangáli,		63	1	1	0	1	1	3	0	1	0	1	3	1	1	3	1	0	1	1	1	1	1	1	1	0	1	0
Asámese,	63		1	1	0	1	1	5	8	3	10	15	3	3	1	3	1	0	1	0	0	0	0	0	0	0	0	0
Khamtí,	1	1		92	0	47	20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11	13	15	13	20	13
Siamese,	1	1	92		0	47	20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11	13	15	13	20	13
Áká,	0	0	0	0		47	20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11	13	15	13	20	13
Abor,	1	1	1	1	1		47	20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11	13	15	13	20
Mishmí,	1	1	0	1	1	1		20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11	13	15	13	20
Barmese,	3	5	1	1	0	1	1		20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11	13	15	13
Karen,	0	8	0	0	0	0	0	1		20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11	13	15
Singpho,	1	3	0	0	0	0	0	1	1		20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11	13
Jili,	0	0	0	0	0	0	0	0	1	1		20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11	11
Gáro,	3	10	3	3	1	3	3	5	3	3	5		20	20	8	17	11	10	23	17	21	70	22	16	10	21	13	11
Manipuri,	0	3	0	0	0	0	0	0	0	0	0	1		20	20	8	17	11	10	23	17	21	70	22	16	10	21	13
Songpú,	1	3	1	1	0	1	1	1	0	1	0	1	1		20	20	8	17	11	10	23	17	21	70	22	16	10	21
Kapwi,	1	3	1	1	0	1	1	1	0	1	0	1	1	1		20	20	8	17	11	10	23	17	21	70	22	16	10
Koreng,	3	5	1	1	0	1	1	3	1	3	1	3	3	3	3		20	20	8	17	11	10	23	17	21	70	22	16
Marám,	1	1	0	0	0	0	0	1	0	1	0	1	1	1	1	1		20	20	8	17	11	10	23	17	21	70	22
Champhung,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		20	20	8	17	11	10	23	17	21	70
Luhuppa,	1	3	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1		20	20	8	17	11	10	23	17	21
N. Tángkhul	1	3	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1		20	20	8	17	11	10	23	17
C. Tángkhul	1	3	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1		20	20	8	17	11	10	23
S. Tángkhul	1	3	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1		20	20	8	17	11	10
Khoibá,	1	3	1	1	0	1	1	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1		20	20	8	17	11
Maring,	1	3	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1		20	20	8	17
Anamese,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		20	20	8
Japanese,	1	3	0	0	0	0	0	1	0	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1		20	20
Corean,	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		20

Request for specimens of other Languages.

The foregoing table is to be regarded only as the commencement of a series of comparisons, which it is desirable to extend to as many languages as practicable. We would therefore request persons residing in various parts of India, or in other countries, to furnish specimens of such dialects as are spoken in their respective neighbourhoods, including all the words given in the table, by which means a general comparison may be readily made. In addition to the list of words, it is desirable to obtain information on the following points:

1. Within what geographical limits the language described is spoken.
2. The estimated number of people who speak it.
3. The account they give of their own origin, and any circumstances

which, in the opinion of the writer, tend to elucidate their origin, and to establish an ancient connection between them and other races.

4. Whether the language is originally monosyllabic or polysyllabic. If the former, have any polysyllabic words crept in, and from what source?

5. Does the language possess a variety of tones? How many and what are they?

6. Is the pronunciation of the language uniform throughout the district in which it is spoken? Are the sounds of particular letters varied, in certain positions, for the sake of euphony?

7. Is it a written language? If so, whence does it derive its alphabet? Is its alphabet well adapted to express the sounds of the language, or otherwise?

8. How many vowel sounds does it contain? How many consonants?

9. What languages does it resemble in grammatical construction? Do the nouns undergo any change of form on account of case, gender, or number? If not, how are these accidents expressed?

10. Are the verbs inflected to express the various moods and tenses? Or are these determined by the use of prepositive or postpositive particles?

11. Are adjectives varied to agree with their nouns? Have they any degrees of comparison? What is the method of forming the numerals above ten? Are there any generic particles affixed to the numerals?

12. Has the language an article?

13. Are there different forms for the personal pronouns, designating the superiority or inferiority of the speaker or hearer?

14. In what order are the different parts of speech arranged in a sentence? Does the possessive case precede or follow the word by which it is governed? Is the objective governed by prepositions, or postpositions? Does the verb precede or follow the objective which it governs? Do adverbs, conjunctions, auxiliaries, and other particles precede or follow the verbs which they modify?

IV.—*Specimens of Buddhist Inscriptions, with symbols, from the west of India.* By *Colonel* W. H. Sykes, *Hon. Mem., As. Soc. &c.*

The admirable and efficient use you have made in your able journal of the ancient inscriptions and ancient coins found in various parts of India, induced me to apply to withdraw all my copies of inscriptions met with in Western India from the hands of the Royal Asiatic Society with a view to offer them to you to make such use of as you might think proper. My application to the Royal Asiatic Society was met with an assurance that the inscriptions, which had been transmitted to the literary society of *Bombay* very many years ago, and which were subsequently sent by this society to the R. A. S., were to be published immediately; this assurance precluded further interference on my

part and I shall therefore not do more than transmit to you, copies of such inscriptions as I think from the associated emblems or monographs may assist to throw light upon some of the coins you have published. As preliminary to my observations you must permit me to quote a passage from your own elaborate account of the coins which appear in your journal. You say most justly and philosophically that, "It is an indisputable axiom that unstamped fragments of silver and gold of a fixed weight must have preceded the use of regular coin in those countries where civilization and commerce had induced the necessity of some convenient representation of value. The antiquarian therefore will have little hesitation in ascribing the HIGHEST GRADE of ANTIQUITY in Indian numismatology to small flattened bits of silver or other metal which are occasionally discovered all over the country, either quite smooth, or bearing only a few pinch-marks on one or both sides; and generally having a corner cut off as may be conjectured for the adjustment of their weight."—Vol. iv. p. 627. If it be found that Baudha emblems or Baudha monographs exist upon such coins, we shall have the *highest grade of antiquity* in Indian numismatology associated with Buddhism. And that such is the case you have supplied numerous instances, and vol. iv. pls. 31 and 34, of the square kind, coins 26, 27, 32, 51 and 18 are denominated ancient Hindu coins, but which from their emblems or monographs, are evidently coins of Buddhist dynasties; at least they must be admitted to be such until we can prove from unquestionable ancient Hindu inscriptions that similar emblems or monographs were used by the Hindu inhabitants of India in contra-distinction to the Buddhist inhabitants. You will perceive that the monograph which characterizes the above coins is the  and a reference to my perfect Baudha inscriptions will prove that this emblem is initial or final, or both, in every inscription excepting the second. Very many of the rounded coins, which according to your dictum are comparatively more recent than the square coins, are equally characterized by the emblems.

Proceeding to another emblem common to the coins and the Buddh inscriptions, it will be seen that the initial symbol of inscription No. 6, is absolutely identical with the emblem or monograph over the back of the elephant on the coin No. 9, on the reverse of which is a bull usually denominated by Europeans a brahmany bull; but which, as it is found in Buddhist sculpture as well as on Buddhist coins, might with equal propriety be denominated a Buddhist bull. The partially obliterated emblem on coins 5, 13, is no doubt the same as that in coin 9.

It may be a question whether or not the symbol is the original of that ☧ found on so many other coins whether Indoscythic, Canouj, or Hindu,—or it may be, that the initial symbol of inscription No. 2, has a greater claim, with its four points. I do not perceive any symbol on the coins exactly corresponding to the initial emblem of inscription No. 3, but the male figure in coin 16, plate 38, vol. iv., is pointing downwards to a form not very far removed from it. One of the emblems observed on the Canouj series of coins is a pole, on the top of which is a compound object not referable to any known form; an erect male figure, called by you the sacrificing rája, with a glory round his head, or the crescent behind his shoulders, looks towards this emblem: on the reverse is a female either seated on a stool, on a bed, or on a couchant lion. I beg of you to bear this remarkable emblem on the one side, and the female seated on a lion on the other side, particularly in mind, for they will assist to connect the Canouj series of coins with a Buddhist dynasty. In illustration of the emblem I transmit a sketch of the principal figure of Buddh in alto relievo in the celebrated cave temple of *Karleh*. You will perceive that Buddh is seated on a lotus flower, supported by the identical emblem met with on the coins, vide plate 38, coins 16, 17; plate 39, coins 18, 19, 20, et seq. That the emblem is sacred is evident from its supporting Buddh; and the figures holding up the pole are no sublunary personages, for their heads are shrouded by the seven-headed snake which shrouds Buddh himself in some of the sculptures at *Ellora*. In coin 24 G. pl. 39, vol. iv. the emblem is placed between a male and female (probably the rája and his wife of the coins) both of whom are looking up to it; and the female appears to be making an offering. You state this emblem to be a standard having a bird at the top, somewhat resembling the Roman eagle; and you read the name of the rája to be KUMARA GUPTA. A relook at coin 20, pl. 39, vol. iv., in which the outline of the emblem appears to be quite perfect will probably induce you to compare it again with other coins, to ascertain what changes of form the emblem undergoes. In the sketch I have sent you will observe the association of Buddh with lions, (odd as they look) antilopes and snakes.

I now come to a remarkable coincidence. On coin 25, pl. 39, vol. iv. a female is represented seated on a couchant or reposing lion. This coin you call the *Conolly* coin, from that gentleman's discovery of it, and the legend is read *Srí* SINHA VIKRAMA. I beg of you to take up the 3rd volume of the Transactions of the Literary Society of *Bombay*, and turn to my account of the caves of *Ellora* and you will there find a sketch absolutely identical with the figure on the coin. We have

the exact position of the lion (in my account inadvertently called tiger; but it is a *maned* lion), the exact position of the right leg of the female; the same aspect of the figure, the glory round the head; and the same ornaments on the arms above the elbow, and in the same female figure on other coins we observe the same triple necklace. My sketch represents an alto-relievo figure cut out of the rock in the *Buddh* cave temple at *Ellora*, now most absurdly denominated by the Hindus *Jagannáth Subha*, and the figure herself with equal absurdity is called *Bhagésrí Bhowaní*, but in *Indra Subbah*, she is called *Inderaní*, and is sculptured on the walls of the hall. A tree is sculptured on the wall behind the female figures, in which are roosting peafowls. I mention this, because, from the female in coins 28 and 30 being associated with peafowls, she is considered to be the wife of *Kartika*. The originals of my sketch are as large as life, and *Inderaní* is sculptured on the terminal wall of a long vestibule to the crypt or sacred place where Buddh is sculptured: the opposite terminal wall of the vestibule has corresponding figures as large as life (with the exception of the elephant) of a man seated on a couchant elephant, a tree is behind the figures and on the branches peafowls are seated, and the man is now called Indra. As there are not any sacred symbols connected with these figures, but as they were evidently not secondary objects with the sculptors or excavators of the temple, not less from their position than from their execution, I have for some years been accustomed to consider them representations of the prince and his consort, by whom the cave was executed; and in this opinion I was confirmed by similar figures being met with under similar circumstances in two other Buddh caves; there being only some slight difference in the position of the female upon the lion, such as is seen in coin 27, and in one instance the lion is by the side of the female.

If therefore these coincidences justify the belief that the female figure on the coin and the female figure in the Baudha caves of *Ellora* be the same, we come to the conclusion that the caves in which the figures are found were excavated by a Budhist prince, named VIKRAMA MAHENDRA GUPTA; and the form of the Devanágrí letters upon the coin will give a period of 2000 to 2500 years for the date of the excavation. Of course the caves were excavated by different princes, for such astonishing works of art could only have been perfected in many generations.

It would appear that upon the ancient coins, whether of the Canouj series, from *Behat*, *Saurashtra*, *Jaunpoor*, or Western India, on some or all of them are found emblems, symbols, monograms, figures of men and

animals, trees, peafowls, &c.—all of which are to be met with sculptured in Baudha cave temples; and the coins are impressed with an antique form of the Devanágrí which is only met with in Buddhist inscriptions in Buddhist works of art. Now until we find the same symbols, monographs, figures, and the same antique form of the Sanskrit character in Hindu works of art; (and there is nothing of the kind whatever in the numerous cave temples in Western India dedicated to Shewun (Siva) particularly there is not any inscription in the antique form of the Devanágrí,) we may legimately infer that Buddhists are the authors in cases where these symbols are found, and that Hindus are not the authors. Moreover, the use of the antique form of the Devanágarí indicates a priority in the use of it, over those who appear to have used a modified form of it.

I beg of you to make any use you please of this letter; for I have not any objection to my opinions being subjected to the test of public criticism. Truth is my object and I am quite satisfied to be set right in case I am wrong.

Note on Col. Sykes' *Inscriptions, by* Jas. Prinsep, *Sec. As. Soc., &c.*

Colonel Sykes pays us no small compliment in wishing to transfer back again to India for elucidation the numerous inscriptions he so long since collected in the West of India. This is indeed reversing the order of things!—while we are sending to Europe all those great men eminent for their knowledge of the ancient tongues of India, and discouraging (if not persecuting) the study of these tongues by the natives themselves;—while the public declaration of a late president (Sir Charles Grey) still rings in our ear, that the subject of Indian literature and antiquity was now exhausted, and that we must seek other matter of physical research to occupy the attention of the members of the Asiatic Society, we are awakened and encouraged to a fresh train of antiquarian investigation by an appeal from our retired comrades, who had carried away with them stores of precious materials to lie long neglected, or to excite fruitless curiosity in a clime uncongenial to their elucidation.

More than one great question is certainly involved in the solution of the cave inscriptions of western India. To whom is to be attributed their construction? From what period have they existed?—In what language and character are the records sculptured?—Unknown to Colonel Sykes, the whole of these questions have been already solved as regards the pillar monuments on this side of India:—They are of the third or fourth century anterior to our era: they are of Buddhist foundation;

and the language is not Sanskrit, but a link between that grammatical idiom and the Páli of the Buddhist scriptures. The alphabet appears to be the very prototype of all the *Devanágari* and *Dakshini* alphabets: and nothing in the pure Sanskrit tongue has yet been discovered preserved in this character: indeed it would be impossible that it should; because, still more than the Páli, the alphabet is deficient in many letters absolutely necessary to Sanskrit syntax.

Further, of the cave inscriptions on this part of India, we have already published one from *Gaya* in the selfsame alphabet and language, of the age of rája DASARATHA (the II.) In the present number we publish another equally important evidence from *Cuttack*, proving that the caves in the *Khandgiri* hill were *repaired* and appropriated if not excavated, in the time of AIRA rája a Buddhist sovereign of Calinga. From the west of India we have hitherto only had one specimen (that of Dr. STEVENSON from *Karli*) to deal with, and this we have with reason suspected of being also *Páli*, though the character has evidently undergone the changes of a century or two.

Whatever may be our desire to penetrate further into the secret, we still by no means regret that Col. SYKES has not sent the whole of his collection to gratify our curiosity. Impressed with a conviction that no written copy is to be trusted implicitly we should have either hesitated to look at them at all, or perhaps should have wasted hours of labour in vain on them; while we know that our zealous fellow-labourers in *Bombay* are meantime adopting the best means of securing authentic facsimiles of these very inscriptions, and are even now engaged in examining their contents. Nevertheless these half-dozen brief specimens from *Jooneer*, selected as containing symbols identical with those on the various Buddhist groupes of coins, have, invited attention in spite of all our resolutions! and though future comparisons may change and correct many letters in our reading, we cannot refrain from publishing the results, strikingly confirmatory as they are of the fact that these Buddhist cave inscriptions are also in the vernacular of the day, all equally simple and intelligible—now that the key has been discovered. This key is of course no other than the one recovered through the *Bhilsa dánams*: and it is a singular fact that the principal deviation in the *Sainhadri* cave alphabet, from what may be considered as the original type, (namely, that of the letter *d*,) has been traced and verified through the recurrence, in many of the short inscriptions, of the somewhat similar expression *daya dhama*, (Sanskrit *dayá-dharma.*) The principal acts here are of 'compassion and piety, as those were of 'charity;' not that the latter expression does not

also occur in some of the present examples: and particularly in fig. 1 of the accompanying plate, wherein Colonel Sykes happily confirms the correction I ventured to introduce into the Rev. Dr. Stevenson's copy of the same line (see page 468 of the present volume). Strange to say there are many other discrepancies of equal magnitude in the two copies of this simple document: Col. Sykes' line reading:

Saharavisabhoti putasa (a) gimita ukasa sihathabhodánam.

The change from *pihathato dára* to *sihathabho dánam*, immediately opens our eyes to the subject of the record, *sihathabho* (or *sihathambha*) being the regular Pálí orthography of सिंह स्तंभ: *Sinha stambha*s, the lion pillar; and Col. Sykes informs us that the inscription is engraven "on the obelisk or pillar in front of the *Kárli* cave." The obvious translation then is,

"This lion pillar is the gift of Agimitra Ukas the son of Saha Ravisabhoti."

In fig. 2 a perfect inscription from the doorway of the *Sainhadrí* caves north of *Jooneer (Júnira)*, we may remark the commencement of a departure from the original form in some of the letters used: thus the *t* or 𑀢 is changed to 𑀣, a common form also in the *Girnar* inscriptions, and evidently the link between the original form and the 𑀣 of the *Mahamalaipura* inscriptions, and of the various southern alphabets: it may be also seen in inscription 3 of the present plate. This letter would be taken for an *n* by readers on our side of India; and this is perhaps one of the best possible proofs of the authenticity of the primitive form, whence by distinct ramifications in opposite sides of the peninsula the same derivative has come to denote quite a different original! The *n*, of our Samudra Gupta and more modern alphabets is derived from 𑀦; this when written, required the pen to be carried below forming a loop thus 𑀦; which was gradually carried downward in 𑀣 and 𑀡, and ended in the modern न. But I must not attempt on this occasion to analyze individual letters, or I shall be carried away into an endless digression. Correcting the second anomalous letter conjecturally, the line will run thus:—

Dhammika seṇiya sata gabham uḍhí cha daya dhamaṃ.

which corresponds precisely with the Sanskrit:

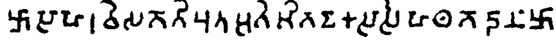
धार्म्मिकसेनीय सतमभं उद्धीच दयाधर्म्मं.

"The hundred caves and the tank of Dha'rmika Seni—his act of piety, and compassion."

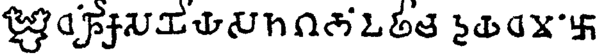
I must be allowed to remark en passant that the letter *n* has here changed its form to 𑀥, which appears to be the original form of the

SAINHADRI CAVE INSCRIPTIONS.

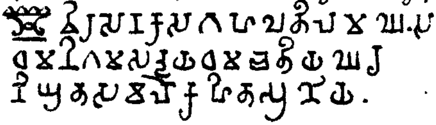
1. *Inscription on the Obelisk in front of the Karli cave.*



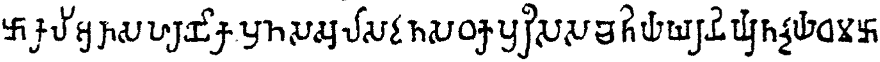
2. *Inscription over the door of the Sainhadri caves.*



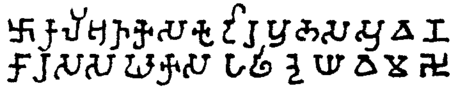
3. *Inscription in a temple containing a Dehgope, at Junir.*



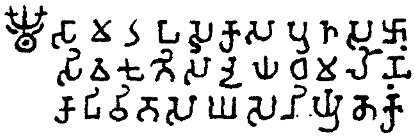
4. *Over the door of a large pillared cave temple, Sainhádri.*



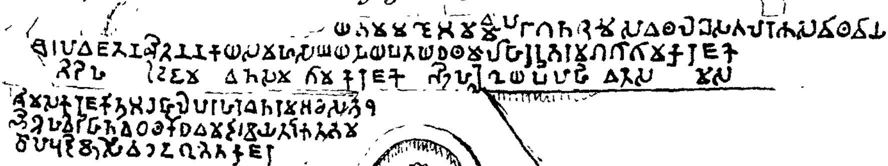
*5. *Over the western cistern, near the large reservoir, do.*



6. *In a panel at the westernmost end of the rock. do.*



7. *Over the principal figure of Buddha in the Karli caves.*





See Coins in Vol IV Pl. 38, 39 for similar Symbols.

(NB. The dimensions of the Image are diminished relatively to the writing to come within the plate)

W.H. Sykes del. J. Prinsep lith.

Printed at the Oriental Lith^c Press _ Calcutta

𑀙, 𑀛, 𑀜, 𑀡, 𑀢 and 𑀣, of successive alphabets, and may explain the circumstance of that class of *n* alone being known in the written Prákrit of the Hindu drama, and of the sacred literature of the Jains. For the word *uḍhi* see observations on No. 5.

The symbol on this inscription, Col. Sykes identifies with that on coins 16, 17, 18, 26, 27, 32 and 51 of plate 34, vol. v.

Inscription 3 may be transcribed in Roman letters thus:

Virasenakasa gahalatila maghasa
Dhama ṇigamasa dayadhama, chetiya-ghara,
Niyuta sama loka hita sukháya.

In Sanskrit this sentence may be rendered with exact conformity:

वीरसेनकस्य गहलतिलमघस्य धर्मनिगमस्य चैत्यगृह नियुक्त सम लोक हित सुखाय

"The compassionate and pious act of Vira Senaka, the *gahalatila magha*, the abode of righteousness,—for the pleasure and advantage of the virtuous attendants of the chaitya temple."

This inscription is stated by Col. Sykes to be "on a Buddhist cave temple *in which there is a large isolated dehgopa*, under the hill fort of *Seunere* or *Jooneer*." The expression *chetiya ghar* of course alludes to this interior structure: it is exactly the modern vernacular name, and it introduces us with certainty to a new letter, the *gh*, which has been hitherto a desideratum; and which was of doubtful existence in the primitive alphabet. Some modification is also perceptible in the *kh* of the word *sukháya*, of the reading of which however there can be no reasonable doubt.

The symbol at the head of this inscription agrees precisely with that of many of our golden Indo-Scythic coins.

The name *gahalatila magha* reminds us of a tribe of Rájputs, the *Gehlotes*, or *Grahalotes* who founded the Gohila dynasty of *Mèwár*, after the destruction of the Balabhis of *Saurashtra*. *Magha* is the name of one of the *dwipas* or divisions of the universe. It also applies to the *Magas* of the Arracan country, Buddhists who claim to have given their name to the *Magadha* province whence they migrated eastward: but this is doubtful.

Figure 4 is headed, "Perfect inscription over the doorway of the large pillared cave temple within the vestibule, *Sainhadri* caves."

Some little ambiguity remains as to the third letter which may be either *a* or *s*; in the latter case the sense will only vary so far as to introduce the name of the *mother* as well as of the father of the benefactor—*Kalí sutasya*, 'born of Kalí'—but as the same letter occurs in the next inscription without change, I think it must be an *a*

rather than an *s*, although we have thus a collision between two vowels.

Kalí átasa hæraṇika putasa sulísadatasa ṭhakapurisasa chetiya ghara niyuta dayadhama.

In Sanskrit:

कल्यार्त्तस्य हैरण्यक पुत्रस्य सूलेशदत्तस्य ठक्कपुरेशस्य चैत्यगृह नियुक्त दय धर्म

"The pious act of SULISADATTA, lord of the city of *Thaka*, the son of KALI' A'TA (or KALYARTA) the gold merchant, for the attendants on the chaitya-temple."

The name of the rich person at whose expense the cave was apparently dug or ornamented, may be translated 'given by the sun'—equivalent to *Apollodotus* of the Greeks; it may also be read *Súlisa datta* (given of SIVA); both are somewhat at variance with a *Bauddha* profession. The town over which he ruled looks very like *Thákurpura*.

No. 5, of the same plate, is 'enclosed in a panel, over the western cistern near the large reservoir in the *Sainhadra* caves.'

Kalí átekasa kuṭira putasa sudhaṇa
Kánasa saghakasa uḍhi dayadhama.

Here the four opening letters are the same as in the last example, but they are followed by a *k*, and the rest of the name is different. The doubtful word in the second line is evidently the same as one in the second inscription, where from following *satagabham* with a conjunctive '*cha*' it seemed to denote some similar object of art. From the position of the present inscription, that object could be no other than a reservoir for water, and from analogy to the primitive alphabet the initial letter should be the vowel L or *u*. In WILSON's dictionary I accordingly found the word उद्र : *uḍhras*, water, whence would naturally be formed उद्री *uḍhrí*, or in Pálí, *uḍhí*, a tank, or water reservoir. Again the letter *t* of *putasa* more resembled a *bh*, which if so would make the reading *kuṭíra pubhasa* (Sanskrit कुटीरप्रभस्य *kuṭíra prabhasya* or *prabhavasyá*, enlightening or born in a cottage)—and the whole sentence:

"This tank is the pious work of KALI' ATAKA the humbly born, the honest acquirer of wealth, the deceased (gone to heaven, *swargágasya?*)"

The modification of the letter *dh* should be particularly noted as it might easily be taken for a *v*, but for the known word *dhama*.

No. 6. This is one of the most curious of the series because of the exact accordance of the initial symbol with the monogram on a large series of the Indo-Scythic coins, commencing with the reverse of the celebrated *Mokadphises* coin. There can be little doubt that these signs, placed at the head of every written document, and stampt on the field of every die are, like the *aum* of the brahmans, the cross of

the Christians, or the triangle of the masonic brethren, connected with the religion of the parties. Twenty-four such signs are still in use among the Jains, whose books or traditions may some day instruct us in the allegories they are intended to convey. The present panelled inscription is 'on the most western end of the rock near the chambers of the *Sainhádri* caves.' It runs in the usual strain :

Sámaḍapasakasa putasa,
Sivakukhisa daya dhama dánam,
Kapávibhasa yase niyutakam.

सामडपसकपुत्रस्य शिवकुचिकस्य (?) दयाधर्मदानं कपाविभस्य यशसे निर्युक्तकं

" The pious and charitable endowment of SIVA KUKHI (?) the son of SA'MARAPASAKA (?) redounding to the glory of this most compassionate person."

implying doubtless that the chambers had been constructed by the party, for the accommodation of the priests or ascetics who resided on the spot.

Can we then venture to affirm on the strength of these very brief and detached announcements that we have solved the great question of the origin of the cave temples of western India, those stupendous works of art which it is calculated must have occupied centuries of labour and mines of wealth to excavate ? The obvious answer is ;—if these inscriptions occupy, as they seem to do, prominent and designed places in the works they allude to, they can hardly be imagined to record any thing less than the original construction : or when the excavations were of natural formation, at least their embellishment and architectural sculpture.

In this case we may at once pronounce, from the alphabetic evidence, that the caves were thus constructed or embellished a century or two prior to the christian era, when Buddhism flourished in the height of its glory from *Cashmír* to *Ceylon*.

It is certainly an extraordinary circumstance that among all these inscriptions, the title of rája should never occur, and that such great undertakings should appear to have proceeded from private zeal, from obscure individuals neither connected with the court nor with the priesthood ; for neither any where do we discover the familiar titles of *Sramana, Bhikhu, Mahámati* nor *Arahata* in the present inscriptions.

The above are but a few specimens selected from a mass in the owner's possession, and unimportant compared with those on which we have reason to believe our friends in *Bombay* are now engaged. From their labours must we impatiently expect the solution to Col. SYKES' question now we are told under re-agitation in England—' whether the

buddhists or the brahmans may claim precedence in the history of Indian civilization and literature?' We have already expressed an opinion on this discussion, supported by the strong argument that the language of all our lately disclosed documents is a mere scion of the pure Sanskrit stock, not quite so distant from its parent as the *Páli*, or the Jaina Prákrit, but still widely at variance with the purity and perfection of the sacred language of the *Vedas*.

Nevertheless opponents may argue,—where are any Sanskrit sculptured documents or inscriptions of equal antiquity?—Look at the Sanskrit inscriptions of the *Saiva* sculptures at *Mahamalaipura* so ably deciphered by Mr. Babington*: they are in a character which can be proved to be a regular and even distant descendant of the *lát* character. Again they may argue, does not the word *Sanskrit* imply that the existing language was reformed, dressed and reduced to grammatical restraint, at some period?—this was attended with the introduction of several new letters which are not to be found in the early primitive alphabet, nor even in the early offsets from it, the square Páli, and the old Tamil:—whereas we can trace their gradual incorporation in these western link inscriptions, and we find them fully developed in the well preserved copper-plate grants of the third century so happily coming to aid our studies from *Gujerát*. "Much may be said on both sides,"—but it is most prudent to say nothing at all as yet;—to imitate the best schools of geology, and collect materials without meddling with theories.

We have said nothing of the last of Colonel Sykes's inscriptions,—that over a large figure of *Buddha* in the cave temple of *Kárli*, 35 miles W. N. W. of *Poona*, because it is evidently imperfect and mutilated. It would be easy to pick out detached passages capable of interpretation, as the following towards the end of the first line ..... *parágata ime sava thala (sthalla) vasata lokasa váthavaya (vastaváya)*: quasi, (for the accommodation of foreign pilgrims from all places.) In the following lines frequently occurs the expression *gámaka rajake*, गामकरजुकः 'devotees belonging to the town.' The two expressions point to some endowment for these two classes of devotees. Colonel Sykes in a note describes the figure of Buddha to be 'seated on a lotus flower, supported on a remarkable emblem, held up by two figures whose heads are shrouded by seven-headed snakes. The supposed curly hair of the figures of Buddha is here evidently a cap or head-dress. Like the generality of the figures of Buddha in the cave temples of Western India, it is associated with lions, ante-

* Transactions of the Royal Asiatic Society, vol. II.

lopes and snakes. The inscription occupies the exact situation here represented.'

The allegory of ancient mythology is a distinct study, a language more difficult to read than any of our 'unknown tongues' when the superstitions are once swept away from practice and memory. I cannot yet attempt any explanation of the symbols common to the caves and the coins. But Buddhism still flourishes in neighbouring countries, and thither we must refer for elucidation of these and the thousand other mysteries and anecdotes of the saint's history pictured in stone and in fresco on the deserted caves and temples of his once thriving followers in India.

V.—*Further notes on the inscriptions on the columns at Delhi, Allahabad, Betiah, &c. By the Hon'ble* GEORGE TURNOUR, *Esq. of the Ceylon Civil Service*.*

I have read with great interest, in the *Asiatic Journal* of July last, your application of your own invaluable discovery of the LAT alphabet, to the celebrated inscriptions on FEROZ's column, at *Delhi.*

When we consider that these inscriptions were recorded upwards of two thousand years ago, and that the several columns on which they are engraven have been exposed to atmospheric influences for the whole of that period, apparently wholly neglected; when we consider also, that almost all the inflections of the language in which these inscriptions are composed, occur in the ultimate and penultimate syllables, and that these inflections are chiefly formed by minute vowel symbols, or a small *anuswara* dot; and when we further find that the *Páli* orthography of that period, as shewn by these inscriptions was very imperfectly defined—using single for double, and promiscuously, aspirated and unaspirated consonants; and also, without discrimination, as to the class each belonged, the four descriptions of *n*—the surprise which every reasonable investigator of this subject must feel will be occasioned rather by the extent of the agreement than of the disagreement between our respective readings of these ancient records.

Another very effective cause has, also, been in operation to produce a difference in our readings. You have analysed these inscriptions through a *Brahmanized Sanskrit* medium, while I have adopted a *Buddhis-*

* We consider it a duty to insert this paper, just received, in the same volume with our version of the inscription, adding a note or two in defence of the latter where we consider it still capable of holding its ground against such superior odds!—ED.

tical Páli medium. With all my unfeigned predisposition to defer to your practised judgment and established reputation in oriental research, it would be uncandid in me if I did not avow, that I retain the opinion that the medium of analysis employed by me has been (imperfect as that analysis is) the more appropriate and legitimate one.

The thorough investigation of this subject is of such paramount importance and deep interest, and as (if I have rightly read the concluding sentence of "the fifth inscription round the shaft of Feroz's pillar," which appears for the first time in the July journal,) we have yet *five* more similar columns* to discover in India, I venture to suggest that you should publish my translation also, together with the text in the ancient character, transposed *literatim* from my romanized version†. Future examiners of these monuments of antiquity will thus have the two versions to collate with the originals, and be able to decide which of the two admits of the closest approximation to the text.

In the present note I shall confine myself to a critical examination of the first sentence only of the northern inscription, which will serve to show how rigidly I have designed to adhere to the rules of the *Páli* grammar in my translation of these inscriptions; and then proceed to explain the historical authority I have recently discovered for identifying Piyadasi, the recorder of these inscriptions, with Dhammásóko, the supreme monarch of India, the convert to, and great patron of, Buddhism, in the fourth century before our era.

The first sentence of the northern inscription, after the name of the recorder and the specification of the year of his reign, I read thus:

Hidatapálité dúsapatipádayé, ananta agáyá dhanmakámatáyá, agáya parikháyá, agáyá sásanáyá, agéna bhayéna, agéna usáhéna; ésáchakho mama anusathiyá.

Although the orthography as well as syntax, of your reading, viz. *hidatapálité dúsan*, and which you construe "the faults that have been cherished in my heart," are both defective, a slight and admissible alteration into "*hadayapálité dósé*" would remove those objections, if other difficulties did not present themselves, which will be presently explained, and which, I fear, are insuperable.

The substantive "*patipádayé*‡," however, which you convert into a verb, does not, I am confident, in the *Páli* language, admit of the rendering "I acknowledge

* We know of five, therefore three remain—the Bhittrí may be a fragment of one; that at *Bakrabad*, and one near *Ghazeepore* are without inscriptions.—Ed.

† To this we must demur: we have examined the greater part from perfect facsimiles, and cannot therefore consent to publish a version which we know to deviate materially from the original text.—Ed.

‡ The objection to consider *patipádaye* as a verb does not seem very consistent with the three examples given, all of which are verbs—*patipajjámáti* (the double *jj* of which represents the Sanskrit *dy* not *d*) *S. pratipadyáma iti* or in *atmani pada dwaha*:—and twice, *patipajjitubanti* (*S. Pratipadyatavyam iti*). *Pada* is certainly

and confess" in the sense of *renunciation*. This word is derived from the root "*pada*" "to proceed in, as in a journey;" and with the intensitive prefix "*pati*" invariably signifies "*steadfast observance* or *adherence*." With the prefix of collective signification "*sam*" the verb signifies "to acquire" or "to earn." I gave an instance in the July journal (p. 523), as the last words uttered by BUDDHO on his deathbed.

"*Handadáné, bhikkhawé, amantiyámi wó: wayadhammá sankhára, appamádéna sampádétha.*" "Now, O Bhikkhus! I am about to conjure you (for the last time): perishable things are transitory; without procrastination earn (*nibbánan.*")

With the intensitive prefix '*pati*,' the verb is to be found very frequently in the Buddhistical scriptures. The following example is also taken from the *Parinibbánan sutan* in the *Dighanikáyo*, containing the discourses of BUDDHO delivered while reclining on his deathbed, under the *sal* trees at *Kusinárá*. The interrogator A'NANDO was his first cousin, and favorite disciple.

Kathan Mayan, Bhanté, Mátugámé paṭipajjámáti ? Adassan, Anandáti, Dassané, Bhagawá, kothan patipajjitabbanti? Análápo, Anandati, Alapantéra, Bhanté kathan paṭipajjitabbánti ? Sati Ananda Upaṭṭhá pétabbáti.* "Lord, how should we comfort ourselves in our intercourse with the fair sex? A'NANDO! do not look at them. BHAGAWA! having looked at them, what course should be pursued then? A'NANDO! abstain from entering into conversation with them? In the course of (religious) communion (with them), Lord, what line of conduct ought to be observed? Under those circumstances, A'NANDO! thou shouldst keep thyself guardedly composed."

It is evident, therefore, that the substantive "*paṭipádayé*" signifies "*observance* and *adherence*" and cannot be admitted to bear any signification which implies "*renunciation*."

It is almost immaterial whether the next word be the adjective "*annata*" or the adjective "*ananta*"—I prefer the latter. But "*agáyá*," cannot possibly be the substantive "*aghan*" "sin," in the accusative case plural†. The absence

the root of all; which with the prefix *paṭi (S. prati)* takes the neuter sense of 'to follow after (or observe);' while by lengthening the *a*, *páda*, it has the active or causal sense of to make observance, to declare, ('*padyate*, he goes, *pádayati* or *pádayate*, he makes to go,) the only alteration I bespoke was *pálaṁ* to *pálatam*, to agree with *dosam*—but as the *anuswara* is very doubtful in the *Allahabad* copy, I incline to read (Sanskriticè *hidayatapálatah dosahpaṭipadáyè*, 'I declare (what was) the sin cherished in my heart'—with a view of course to renunciation. The substi tution of *u* for *o* has many examples:—but I never pretended that the reading of this passage was satisfactory.—ED.

* By permutation *d* becomes *jj*, (rather *dy*.—ED.)

† My critic has here been misled by my looseness of translation—had he followed my Sanskrit, he would have seen that *aghâyá* was never intended as an accusative plural of *agham*: I must parse and construe the whole, premising that the texts differ in regard to the final *a* of the 2nd, 3rd, and 4th words, which in some copies of the *Delhi* inscription are long, while on the *Allahabad* facsimile they are all short. In the former case (the one I previously adopted) the reading is (Sanskriticè.)

of the aspirate would not be a serious objection, but "*aghan**" is a neuter noun of the 12th declension. The accusative plural would be "*agáni* or *agé*" and not "*agáyá*," which I read "*agáya*" the dative singular. In this sentence, this word occurs five times, varying in its inflections and gender to agree with the substantive with which it is connected in each instance; proving it therefore to be an adjective, and, I think, "*aggo*" "precious," which is here spelt with a single *g* in conformity with the principle on which all double consonants are represented by single ones in these inscriptions. "*Dhanmakámatáya*" is a *Samása* contraction of "*dhammassa kámatáya*," and signifies "out of devotion to *dhanmo*" "*kámá*" being a feminine noun of the seventh declension makes "*kámatáya*" in the instrumental case, but "*agáya-parikáya agáya susúsáya*," again though terminating in the same manner as *kámatáya*, are in the dative case as *sasusáya* (which I read *Sásanáya*) is a neuter noun of the *tenth* (?) declension; *bhayéna* and *usáhéna* being, the one a neuter of the twelfth and the other a masculine noun of the first declension, both make their instrumental case in "ena." Without a precise knowledge of the *Páli* grammar, it is impossible to define when a case is *dative* and when instrumental. "*Esachakho mama anusathiyá*," you translate, I find, "by these may my eyes be strengthened and confirmed (in rectitude)." The participial verb "*anusathiyá*," could not, I imagine, be made to bear in *Páli* the signification you give it. The preposition "*anu*" signifies "following," "continuance," "in due order," when in composition with the root "*sara*" "to remember" (from which *sathiyá* is derived), the compound term always means "to bear in remembrance" or "perpetuate the remembrance of." If there was any thing to be gained by preserving the "eyes" we might certainly

adj. fem. s. 5.	subs. fem. s. 5.	sub. nt. s. 4	sub. fem s. 5.	ditto	ditto,
Anyata-aghayá	*dharmakámatáyá,*	*aghaya,*	*parikshayá,*	*aghaya susrusáyá*	
3rd case sub. s. 3	sub. s. 3	pro. 1	sub. s. 1	pro. 6	verb pot. s. 3.
aghena	*bhayena,*	*aghena utsáhena,*	*esa—*	*chakshuh,*	*mama anustheyát*

"from the all-else-sinful religion-desire, from examination to sin, from desire to listen to sin (sc. to hear it preached of) by sin-fear, by sin-enormity,—thus may the eye of me be confirmed."

In this translation I have preserved every case as in the Sanskrit, and I think it will be found that the same meaning is expressed in my first translation.

If the short *a* be preferred, the 5th case, *kamatáyá* and *parikshayá*, both feminine substantives must be changed to the 3rd, Sans. *kámatáyai* and *parikshayai* (in *Páli*, *kámatáya* and *parikhaya*)—and the sense will be only changed to "by the all-else-sinful desire of religion,—by the scrutiny into the nature of sin, &c. That *kámatá* (not *kámá*) is the feminine noun employed (formed like *devatá* from *deva*) is certain; because the nominative case is afterwards introduced '*dharma-prekshá, dharma kámatá cha*, &c. Mr. TURNOUR converts these into plural personal nouns, "the observers of dharma, the delighters in dharma"—but such an interpretation is both inconsistent with the singular verb *(varddhisati)*, and with the expression *suve suve (svayam svayam)* 'each of itself'—I therefore see no reason to give up any part of my interpretation of the opening sentence of the inscription.—ED.

* *Aghan* is said to be sometimes masculine, *aghó* which makes *aghé* in the accusative plural.—ED.

with a trifling variation, read the passage "*eṡá*" *chakkhú mama anusathiyá*," *hontu* being understood,—"may my eyes perpetuate the remembrance of these (*dhanmá*)." But I confess I prefer the reading of this passage as it appears in the inscription—"*Esáchakkho mama anusathiyá*,"—the verb "*hessati*" being understood,—and "*eṡá*" agreeing with "*Dhanmalipi*." "This (inscription on *Dhanmo*), moreover, will serve to perpetuate the remembrance of me." This rendering conveys a nobler sentiment, aspiring to more permanent fame, and is in closer confirmity also with the spirit of the last sentence in the fifth inscription.

I have still to dispose of the initial words "*Hidatapálité dusan paṭipádayé*." I acknowledge that I was at first entirely baffled by them. When I had completed the translation of all the four inscriptions, save these three words, I found that they were the edicts of an Indian monarch, a zealot in Buddhism? and from these columns being scattered over widely separated kingdoms of India, it appeared equally certain to me that a *Rájádhirája* of India alone could be the author of them. As far as I was aware, two *supreme* monarchs alone of India had become converts to Buddhism, since the advent of Sa'kya. Dhanma'so'ko in the fourth century before Christ; and Pa'ndu at the end of the third century of our era. I could hit upon no circumstance connected with the former ruler which availed me in interpreting these words. I then took up the *Dhátádátuwanso*, the history of the tooth relic, the only work, I believe, in *Ceylon*, which treats of Pa'ndu. I there found, not only that his conversion had been brought about in consequence of the transfer of the tooth relic from *Dantapura* in the Northern Circars, then called *Kálinga*, to his capital *Páṭilipura* the modern *Patna*; but also met with several passages expressive of Pa'ndu's sentiments strictly analagous with those contained in these inscriptions. This discovery, at the moment, entirely satisfied me, that these three hitherto undecipherable words should be read *hi** *Dantapuraṭó dasanan upádayé*: the *hi* being an expletive of the preceding word, and the other words signifying "from *Dantapura* I have obtained the tooth relic."

Under this impression my former paper on these inscriptions was drawn up. My having subsequently ascertained that Piyadasi is Dhanma'so'ko does not necessarily vitiate this reading; for the tooth relic was at *Dantapura* during his reign also; and there is no reason why Dhanma'sókó likewise should not have paid it the reverential honor of transferring it to his capital. But since I have read your translation, I have made out another solution of these words, furnishing the signification you adopt, without incurring the apparent objections noticed above. The sentence written *in extenso*, divested of permutation of letters, and *samása* contraction might be read; †*Hin atanâ pálité dásapaṭipádayé*. "I have renounced the impious courses cherished by myself." "*Hin*" is derived from the root *há* "to renounce," and is the *Varassa* form of the *ajjatani* tense. By the 35th rule of Clough's grammar, p. 13, when *n* precedes a vowel it is frequently suppressed, and *m* or *d* substituted in its place, as for "*áwan assa*" is written "*áwamassa*" for "*étan awócha*," "*étadawócha*." By this rule, therefore, "*Hin ataná*" would become "*Hidataná*." Again by the "*Tapuriso*" (*Tatpuru-*

* The alterations requisite to admit of that reading are trifling, and chiefly symbolic, in the ancient alphabet.

† This verb *Hin* is most frequently found in the participial form "*hitwá*."

sya) rule (No. 19, p. 79) "*atanápálité*" would be contracted into "*atapálité.*" The reading *in extenso* then becomes contracted into "*Hidatapálité.*" "*Dosa*" from "*du*" signifies "impure or impious" and "*patipadayé,*" as already explained are "observances or actions in life." My reading therefore of the entire sentence is now "I have renounced the impious observances cherished by myself—out of innumerable and inestimable motives of devotion to *Dhanmo*, and out of reverential awe and devout zeal for the precious religion which confers inestimable protection. This (inscription on *Dhanmo*), moreover, will serve to perpetuate the remembrance of me."

I proceed now to give my authority for pronouncing PIYADASI to be DHANMÁSO'KO.

From a very early period, extending back certainly to 800 years, frequent religious missions have been mutually sent to each other's courts, by the monarchs of *Ceylon* and *Siam*, on which occasions an exchange of the *Páli* literature extant in either country appears to have taken place. In the several *Soléan* and *Pándian* conquests of this island, the literary annals of *Ceylon* were extensively and intentionally destroyed. The savage RAJASINGHA in particular, who reigned between A. D. 1581 and 1592, and became a convert from the Buddhistical to the Brahmanical faith, industriously sought out every Buddhistical work he could find, and "delighted in burning them in heaps as high as a cocoanut tree." These losses were in great measure repaired by the embassy to Siam of WILBAGADERE MUDIYANSE, in the reign of KIRTISRI RAJASINGHA in A. D. 1753, when he brought back Burmese versions of most of the *Páli* sacred books, a list of which is now lodged in the *Daladá* temple in *Kandy*.

The last mission of this character, undertaken however without any royal or official authority, was conducted by the chief priest of the *Challia* or cinnamon caste of the maritime provinces, then called KAPAGAMA théro. He returned in 1812 with a valuable library, comprising also some historical and philological works. Some time after his return, under the instructions of the late Archdeacon of *Ceylon*, the Honorable Doctor TWISLETON, and of the late Rev. G. BISSET, then senior colonial chaplain, KAPAGAMA became a Convert to christianity, and at his baptism assumed the name of GEORGE NADORIS DE SILVA, and he is now a modliar or chief of the cinnamon department at *Colombo*. He resigned his library to his senior pupil, who is the present chief priest of the *Challias*, and these books are chiefly kept at the wihare at *Dadála* near *Galle*. This conversion appears to have produced no estrangement or diminution of regard between the parties. It is from GEORGE NADORIS, modliar, that I received the Burmese version of the *Tíká* of the *Maháwanso*, which enabled me to rec-

tify extensive imperfections in the copy previously obtained from the ancient temple at *Mulgirigalla*, near *Tangalle*.

Some time ago the modliar suggested to me that I was wrong in supposing the *Maháwanso* and the *Dípawanso* to be the same work, as he thought he had brought the *Dípawanso* himself from Burmah. I was sceptical. In my last visit, however, to *Colombo*, he produced the book, with an air of triumph. His triumph could not exceed my delight when I found the work commenced with these lines quoted by the author of the *Maháwanso** as taken from the *Maháwanso* (another name for *Dípawanso*) compiled by the priests of the *Utáru* wihare at *Anurádhapura*, the ancient capital of *Ceylon*. "I will perspicuously set forth the visits of *Buddho* to *Ceylon*; the histories of the CONVOCATIONS and of the schisms of the theros; the introduction of the religion (of BUDDHO) into the island; and the settlement and pedigree of the sovereign WIJAYO."

In cursorily running over the book, at the opening of the sixth *Bhánawáro* or chapter, which should contain the history of DHAMMA'SO'KO, I found the lines quoted from my note to you in page 791.

This *Dípáwanso* extends to the end of the reign of MAHASINO, which closed in A. D. 302. As the *Maháwanso*, which quotes from this work, was compiled between A. D. 459 and 477, the *Dípáwanso* must have been written between those two epochs. I have only cursorily run over the early chapters to the period where the Indian history terminates without collecting from that perusal any new matter, not found embodied either in the *Maháwanso* or its *Tíká*, excepting the valuable information above mentioned, and a series of dates defining the particular year of each sovereign's reign, in which the several hierarchs of the Buddhistical church died, down to MOGGALIPUTTATISSO the chief priest who presided at the THIRD CONVOCATION in the reign of DHAMMÁSÓKO. These dates may remove some of the incongruities touched upon in my second paper on Buddhistical annals.

This Burmese copy, however, of the *Dipáwanso* is very imperfect. Each *Bhánawáro* ought to contain 250 verses. Several chapters fall short of this complement; and, in some, the same passage is repeated two and even three times.

It will be highly desirable to procure, if possible, a more perfect copy, together with its commentary, (either *Tíká* or *Aṭṭhakathá*) from the Burmese empire.

On my return to *Kandy*, and production of the *Dípáwanso* to the Buddhist priests, who are my coadjutors in these researches, they

* Vide in the quarto edition the introduction to the *Maháwanso*, page xxxi.

reminded me that there was a *Páli* work on my own shelves, which also gave to DHANMÁSÓKO, the appellation of PIYADASO. The work is chiefly in prose, and held in great estimation for the elegance of its style: hence called "*Rasawáhiní*"—"sweetly flowing" or the "harmonious stream."

The Singhalese version, of which this *Páli* work is a translation, was of great antiquity, and is no longer extant. The present copies in that language are merely translations of this *Páli* edition. I am not able to fix the date of this *Pali* version, as the author does not give the name of the sovereign in whose reign he flourished—but the period is certainly subsequent to A. D. 477, as he quotes frequently from the *Maháwanso*. The author only states, that this work is compiled by KORATTHAPÁLO, the pious and virtuous incumbent of the *Tanguttawankapariwéno* attached to the *Mahawiháro* (at *Anurádhapura*); and that he translates it from an ancient Singhalese work, avoiding only the defects of tautology and its want of perspicuity.

In one of the narratives of this book, containing the history of DHANMÁSÓKO, of ASANDHIMITTA' his first consort after his accession to the Indian empire, of his nephew NIGRO'DHO, by whom he was converted to Buddhism, and of his contemporary and ally DE'WA'NANPIYATISSO, the sovereign of *Ceylon*,—DHANMÁSÓKO is more than once called PIYADÁSO, viz.:

"*Madhudáyako pana wánijo Déwalókatá chawitwá, Pupphapuré ráyakulé uppajitwá* PIYA'DASO *kumáro hutwá chhattan ussápetwá sakala-jambádípá éka-rójjan akási**."

"The honey-dealer who was the donor thereof (to the *Paché Buddho*) descending by his demise from the *Déwalóko* heavens; being born in the royal dynasty at *Pupphapura* (or *Patilipura, Patna*); becoming the prince PIYADA'SO and raising the *chhatta*†, established his undivided sovereignty over the whole of *Jambudípo*"—and again—

"*Anágaté Piyadáso, náma kumáro chhattan ussápetwá* ASÓKÓ *náma* DHANMA RA'JA' *bhawissati.*"

"Hereafter the prince PIYADA'SO having raised the *chhatta*, will assume the title of ASÓKÓ the DHAN'MA RA'JA', or righteous monarch."

It would be unreasonable to multiply quotations which I could readily do, for pronouncing that PIYADÁSO, PIYADASINO‡ or PIYADASI, according as metrical exigencies required the appellation to be written, was the name of DHANMÁSÓKO before he usurped the Indian empire; and it is of this monarch that the amplest details are found in *Páli* annals. The 5th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, and 20th chapters of the *Maháwanso* contain exclu-

* Vide page 24 of the *Maháwanso* for an explanation of this passage.

† Parasol of dominion.

‡ Piyadassino is the genitive case of Piyadasi, प्रियदर्शिनः—ED.

sively the history of this celebrated ruler, and there are occasional notices of him in the *Tíká* of that work, which also I have touched upon in my introduction to that publication. He occupies also a conspicuous place in my article No. 2, on Buddhistical annals. His history may be thus summed up.

He was the grandson of CHANDAGUTTO (SANDRACOTTUS) and son of BINDUSÁRO who had a numerous progeny, the issue of no less than sixteen consorts. DHANMÁSÓKO, who had but one uterine brother, named TISSO, appears to have been of a turbulent and ambitious character; BINDUSÁRO consigned him to an honorable banishment by conferring on him the government of *Ujjéni (Oujein)** " in his apprehension arising from a rumour which had prevailed that he (ASÓKO) would murder his own father; and being therefore desirous of employing him at a distance, established him at *Ujjéni*, conferring the government of that kingdom on him."

While administering that government he formed a connection with CHE'TIYA DE'WI a princess of *Chétiyagiri*, and had by her a son and daughter, MAHINDO and SANGHAMITTA', who followed their father to *Patilipura*, subsequently entered into the sacerdotal order, and were the missionaries who converted *Ceylon* to Buddhism. CHE'TIYA DE'WI herself returned to her native city. On his death-bed, BINDUSA'RO sent a " letter" recalling him to his capital, *Patilipura*. He hastened thither, and as soon as his parent expired, put all his brothers, excepting TISSO, to death, and usurped the empire. He raised TISSO to the dignity of *Uparájá*,—which would appear to be the recognition of the succession to the throne.

In the 4th year after his accession, being the year of *Buddho* 218, and before Christ 325†, he was inaugurated, or anointed king. In the 3rd year of his inauguration, he was converted to Buddhism by the priest NIGRODHO the son of his eldest murdered brother, SUMANO. In the 4th year TISSO resigned his succession to the empire, and became a priest. In the 6th MAHINDO and SANGHAMITTA also entered into the sacerdotal order. In the 17th the THIRD CONVOCATION was held, and missionaries were dispatched all over Asia to propagate Buddhism. In the 18th MAHINDO arrived in *Ceylon*, and effected the conversion of the Ceylonese monarch DE'WANANPIYATISSO and the inhabitants of this island. In the same year SANGHAMITTA, the bo-tree and relics were sent by him to *Ceylon*. In the 30th his first con-

* Introduction to the *Maháwanso*, p. xlii.

† The second paper on "Buddhistical Annals" notices the discrepancy of about 60 years between this date, and that deduced from the date of European classical authors connected with ALEXANDER'S invasion.

sort espoused after his accession, ASANDHIMITTA', who was zealously devoted to Buddhism, died; and three years thereafter he married his second wife. He reigned 37 years.

The five short insulated lines at the foot of the *Allahabad* pillar, having reference to this second empress, is, by its position in the column, a signal evidence of the authenticity, and mutual corroboration of these inscriptions and the *Páli* annals. As DHANMA'SO'KO married her in the 34th year of his reign, she could not have been noticed in the body of the inscriptions which were recorded on the 27th. I fear we do not yet possess a correct transcript of these five lines*. The passage in the *Maháwanso* which refers to this queen is curious, and may hereafter assist the correct translation of these five lines. I therefore insert it.

1 *Aṭṭhárasáhi wassamhi Dhammásókassa Rájino*
Mahámégha-wanárámé mahábódhi patiṭṭhahi.
2 *Tató dwádasamé wassé mahési tassa rájinó*
piyá Asandhimittá sá máta Sambuddhamámiká.
3 *Tató chatutthawassamhi, Dhammásóko mahípati*
tassárakkhan mahésitté ṭhapési wósamá sayán.
4 *Tatótu totiyé wassé sabbálárápamánini*
" mayápicha ayán rájá maháboádhin mamáyati,"
5 *Iti kódhawasán gantwá, attanótattha káriká*
manḍukaṇṭakayógéna maháboádhimaghátayi.
6 *Taté chatutthé wassamhi Dhammásóko maháyasó*
anichchatáwasampattió: sattatinsosamá imá.

"In the eighteenth year of the reign of DHAMMA'SÓKO, the bo-tree was planted in the *Mahámégawano's* pleasure garden, (at *Anurádhapura*). In the twelfth year from that period, the beloved wife of that monarch, ASANDHIMITTA', who had identified herself with the faith of Buddho, died. In the fourth year (from her demise), the rájá DHAMMA'SO'KO, under the influence of carnal passions, raised to the dignity of queen consort, an attendant of her's (his former wife's). In the third year from that date, this malicious and vain creature who thought only of the charms of her own person, saying, "this king, neglecting me, lavishes his devotion exclusively on the bo-tree,"—in her rage (attempted to) destroy the great bo with the poisoned fang of a toad. In the fourth year from that occurrence, this highly gifted monarch, DHAMMA'SO'KO, fulfilled the lot of mortality. These years collectively amount to thirty-seven."

I have not had time to examine the fifth inscription round the *Delhi* column carefully, and I apprehend that the transcript is not altogether perfect yet. The last line and half of this inscription, I should be disposed to read thus:

"*E'tán Dáwánanpiya áha; 'iyán dhanmalibi ata aṭhasiláṭhambáni, Wisaliṭṭha-lékkhániwa tata kantawiyá: éna éva chiraṭhikasiya.*" In the *Páli* considered

* See page 966 which had not reached the author when the above was written.—ED.

the most classical in *Ceylon*, the sentence would be written as follows : *Etan Déwánanpiya áha : iyan dhanmalipi atha atthasiláthambáni Wésáliṭṭha-lékhániwa tatha (tatha) kaṭá ; tena ésá chiraṭṭhitiká siyá.*

" DE'WA'NAN'PIYA delivered this (injunction). Thereafter eight stone columns have been erected in different quarters like the inscriptions on DHA'NMO established at *Wésáli*. By this means this (inscription) will be perpetuated for ever."

If this reading be correct*, as I have said before, we have still five more of these columns to discover in India.

I would wish to notice here that there are several errata in the *Páli* quotations in the July journal occasioned, probably, by the indistinction of the writing of my copyist. I mention this merely to prevent *Páli* scholars from inferring that those errata are peculiarities in the orthography of that language as known in *Ceylon*. For instance in page 586, you quote me as translating *Viyódhanmá* " perishable things," whereas the words ought to have been " *Waya-dhanmá*."

The inscription fronting north (as corrected by Mr. TURNOUR.)

1. Déwánanpiya Pándu só rájá héwan áhá " Sattawísati
2. wasa abhisiténa mé iyan danmalipi likhápitá-
3. hi. Dantapurato Dasanan upádayin, ananta agáya danmakámatáya
4. agáyaparikháya, agáyasásanáya, agéna bhayena,
5. agénanusáhéna ; ésáchakho mama anusathiyá.
6. Dhanmapékhá, dhanmakámatácha, suwé suwé, waḍhitá. waḍhisantichewa.
7. Purisápicha mé, rakusácha, gawayácha matimácha anuwidhiyantu
8. sanpáṭipádayantucha, aparanchaparancha samádayitwá hémewá antá
9. mahámatápi. E'sahiwidhi yá iyan, dhanména pálitá, dhanména widhiné
10. dhanména sikháyatá, dhanména galíli." Déwánanpiya Pándu só rájá
11. héwan áhá : " Dhanmó sádhukíyancha dhanméti. Apásananwá bahúkan yáni

* This reading involves so many alterations of the text that I must demur to it, especially as on re-examination I find it possible to improve my own reading so as to render it (in my own opinion at least) quite unobjectionable. The correction I allude to is in the reading of *áthá*, which from the greater experience I have now gained of the equivalents of particular letters, I am inclined to read as the Sanskrit verb *áṣṭát* (*Pali áthá*).—The whole sentence Sanskritized will be found to differ in nothing from the Páli—except in that *stambha* is masculine in the former and neuter in the latter :—and that the verb *kataviyá* is required to agree with it.

Iyam dharmalipi ata áṣṭát, sila-stambhá (ni)vá siladharikā(ni)vá tatah kartaviyá (ni), ena (or yena) eshá chirasthiti syát.

" In order that this religious edict may stand (remain), stone pillars and stone slabs (or receptacles) shall be accordingly prepared ;—by which the same may endure unto remote ages."

Athá might certainly be read as *ashto* eight, but the construction of the sentence is thereby much impaired, and further it is unlikely that any definite number should be fixed upon, without a parallel specification of the places where they should be erected.—ED.

12. dayadáni saché sóchayé chakhudánépi mé bahuwidhadinno ? Dipada-
13. chatupadésa pariwáracharésu wiwidhémé anugahé katé ; A'páné
14. dakhinéyé anánipicha mé bahúni kayanáni katáni. Etáya mé
15. athéya iyan dhanmalipi likhápitá héwan anupaṭipajatu ; chiran
16. ṭhitékáche hótiti. Yócha héwan sanpaṭipajisati, sésákatan karontíti !"
17. Déwánanpiya Páṇḍu só rájá héwan áhá : " ' Kayananméwa dakhati' iyan mé
18. ' kayanókatóti' nó na papan dakhati : iyan mé 'pápókatóti' iyanwa 'ádinawá'
19. námati. Dupachawékhóchakhó ésá, éwanchakhó ésá dakhiyé ; imá na
20. ádinawagámininánma. Athacha díné, nithuliyé, kódhamáné, isu-
21. ké, lénanawhaké, máralábhasayasé, ésabádhádikhá, iyan mé-
22. pi dínakáyé, iyan manan mé páratikáyé.

The inscription fronting East.

1. Déwánanpiya Páṇḍu só rájá héwan áhá. " Sattawísati
2. wasa abhisiténa mé iyan dhanmalipi likhápitá. Lókasa
3. hitasukháya sátan apahátattá dhanmawudhi. Pápówá
4. héwan lókasa hitan wakhati. Pachawékháma athan iyan.
5. Nítésu héwan patiyá santésu, héwan apikathésu,
6. kámakáni sukhá awhámíti. Tatháchéwan dahámi hémówá-
7. séwanikáyésu pachuwékhámi. Séwa Pásaṇḍhápi mé púganti
8. wiwidháya púgáya. Ichin iyan ataná pachúpagamané
9. samámokhiyamaté. Sattawísati wasa abhisiténa mé
10. iyan dhanmalipi likhápitá."
11. Déwánanpiya Páṇḍu só rájá héwan áhá. " Yó atikanta-
12. antaré rájáné poséhéwa irisa kathan jáné.
13. Dhanmawaḍhiyé wadhéya ; nócha jáné anúrúpáya dhanmawaḍhiyá
14. waḍhitha" Etan Déwánanpiya Páṇḍu só rájá héwan áhá. " Esama-
15. puṭhan atikantécha antaré héwan irisa rájáné, kathan jáné ?
16. anurupáya dhanmawadhiya waḍhayéti ? Róchojanó anurupáya
17. dhanmawaḍhiyá wadhétha sékinapújané anupaṭipajayé.
18. Kárasujaná anurupáya dhanmawaḍhiyá, waḍhiyanti ; kanasukáni
19. aṭṭhamayéhi ramawadhiyanti. E'tan Déwánanpiya Páṇḍu só héwan
20. áhá " ésamé puṭhan dhanmaséwanéna séwayé. Mé dhanmánusatáné
21. anusésémi. E'tan janá sutan anupaṭṭipajipatá achan namásatá."

The Inscription fronting South.

1. Déwánanpiya Páṇḍu só rájá héwan áhá. " Sattawísati wasa
2. abhisiténa mé, imáni satáni awadhiyáni kathání-séyathá-
3. suké, sariká, arané, chakawáké, hansa, nandimukhá, góráṭhé,
4. jatuká, abá, káparéká, datti, anthikamawé, wédawéyaká,
5. gangapuputhaká, sankajamawé, kaḍhathasagaká, panarasé, simaré,
6. saṇḍiké, rókapadá, parasaté, sétskapóté, gámakapóté,
7. savé, chatupadé, yepi ; luddaganó été nachakhádiyatu.
8. E'lakácha, súkarécha, gabhaniwapáyimináwa, awadhiyápentu ke-
9. pichakéna ; ansamansiké wadhikakathé nó kathawiyé : tásé sajiwé
10. nottipátawiyé : dáwé anatáyéwá wihásiyéwá, nottipátawiyé,
11. jiwénajiwéné pósitawiyé. Tisu chatumásisu tisáyan punamásiyan,
12. tínidiwasáni, chuddasan, pannarasan paṭipadiyé, dhuwéyécha
13. Anupósatté, maré awadhiyé nópi, wikétawiyé. Etániyéwa diwasáni
14. nágawanépi, kwatha, dugasiáni, annánipi jiwánikáyáni
15. nó hantawiyáni. Aṭṭhamipakháyé, chawudasiyé panarasiyé tásáyé
16. punawasané tisá chatumásisu, sádiwasáyé, gónáwána rakhitawiyé
17. ajaké, élaké, súkare éwanpi anné nirakhiyaténé, nirakhitawiyé.

18. Tisáyé punawásayé chatumásiyé chatumásapakhayé apawasá gónásan-
19. rakhaté nó kathawiyé. Yáwa sattawísati wasa abhisiténa mé, étáye
20. antarikáyé yéná wísati bandhanamókháni katáni."

The Inscription fronting West.

1. Déwánanpiya Pándu só rájá héwan áhá. "Sattawísati wasa
2. abhisiténa mé, iyan dhanmalipi likhápitá. Rajjaká mé
3. bahusu pánasatasahasésú janésú áyanti. Tésan yó abhiparé
4. dandawé atapati, yé mé kathi kin? Té rajjaká aswata abhitá
5. kinmáni, pawatayéwun janasa janapadasa hitasukan rupadahéwun;
6. anugahénéwachá, sukhíyana dukhíyana jánisanti; dhanmáya té nacha-
7. wiyéwa disanti janan janapadan. Kin téhi attancha paratancha
8. arádhayéwun? Té rajjaká parusatá patacharitawé man purisánipímé
9. * ródhanáni paticharisanti; tépi chakkéna wiyówadisanti yé na mé rajjaká
10. charantá árundhayitawé, athahi pajanwiya táyé dhátiyá nisijita;
11. aswathérátiwiya tá dháti, charantá mé pajan sukhan parihathawé.
12. Héwan mama rajjaká katé, janapadasa pitasukháyé; yéna été abhitá
13. aswatha sátan awamáná, kamáni pawatéyéwúti. E'téna mé rajjakánan
14. abhiharawadandawé atapatiyé kathé, ititawyéhi ésákiti
15. wiyóharasamuticha siyá. Dandasamatácha, awaitépicha, mé awuté,
16. bandhana budhánan manusánan tíritadandínan patawadhánan, tini diwasáni, mé
17. Yutté dinné, nítikárikáni niripayihantu, Jíwitáyé tánan
18. násantanwá niripayantu: dánan dahantu: pahitakan rupawápanwá karontu.
19. Irichimé héwan nira dhasípi karípiparatan arádhayéwapi: janasacha
20. wadhati: wiwidhadanmacharané; sayamé dánasanwibhágóti†."

Translation of the Inscription fronting North.

The rája Pa'ndu, who is the delight of the dewos, has thus said.

"This inscription on *Dhanmo* is recorded by me who have attained the twenty-seventh year of my inauguration. From *Dantapura*, I have obtained the tooth (relic of Buddho), out of innumerable and inestimable motives of devotion to *Dhanmo*,—with the reverential awe, and devout zeal (due) to the precious religion which confers inestimable protection. This (inscription), moreover, may serve to perpetuate the remembrance of me.

"Those who are observant of *Dhanmo*, and delight in *Dhanmo*, growing in grace, from day to day, will assuredly prosper. Let my courtiers, guards, herdsmen, and learned men, duly comprehend, and fully conform to (the same) uniting (to themselves) all classes, the rich and the poor, as well as the grandees of the land. A course such as this, sustained by *Dhanmo*, inculcated by *Dhanmo*, and sanctified by *Dhanmo*, is the path (prescribed) by *Dhanmo*."

The rája Pa'ndu, who is the delight of the dewos, has thus said.

"Thus this *Dhanmo* is most excellent in its righteousness."

Wherefore should I who have been a charitable donor, in various ways, grieve (to bestow) charitable gifts, whether it be a little food, or a great offering, or even the sacrifice of my eyes? To bipeds and quadrupeds, as well as those employed in my service, various acts of benevolence have been performed by me;

* The letter *chh* is read as *r* throughout; and the letter *u* as *ru*.—Ed.

† By comparing this version with that published in July, it will be seen to what extent the license of altering letters has been exercised. The author has however since relinquished the change of the Rája's name, in consequence of his happy discovery of Piyadasi's identity.—Ed.

and at the *Apáná* (hall of offerings) to those worthy of offerings, by me, both food and other articles, involving great expenditure, have been provided.

"Let it be duly understood that this inscription has been recorded by me with this object, as well as that it should endure for ages. Would but one person fully conform thereto, what would (not) the rest do!"

The rája Pa'ndu, who is the delight of the déwos, has thus said.

"(It may be said) 'this (dispensation) appears to be prodigality itself;' or of me 'he is addicted to prodigality.' That would not appear to us to be an act of impiety; or this, of me, 'he is a sinner;' or this, 'he is a miscreant,' or any such reproaches. The evil designing man (may say) these things, and such a person may represent them so, but they are not the road to (do not inflict) degradation."

"Moreover, by my contemplating the distresses affecting the poor, the unfortunate, the resentful, the proud, the envious, those bent with age, and those on the eve of becoming a prey to death,—(that contemplation) would produce in me a due sense of commiseration towards the destitute."

The Inscription fronting East.

The rája Pa'ndu, who is the delight of the déwos, has thus said.

"This inscription on *Dhanmo* has been recorded by me who have attained the twenty-seventh year of my inauguration. *Dhanmo* prevails for the happiness and welfare of mankind; as well as to prevent the forfeiture of their salvation. Even the sinner would admit, that it (is essential for) the happiness of mankind. Let us, therefore, stedfastly contemplate this truth. While righteous men thereby become devoted to charity, and are bent on discoursing (thereon), let me encourage their benevolent proceedings. In like manner, let me extend my solicitude towards the wealthy; and let me be specially regardful of the multitudes under my sway. Even my *Pásandhi* subjects present me with various tributes. I formed this resolve, under the conviction of the supreme beatitude, (resulting) from an individual himself setting an example."

The rája Pa'ndu, who is the delight of the déwos, has thus said.

"This inscription on *Dhanmo* is recorded by me who have attained the twenty-seventh year of my inauguration—should any person, after the extinction of my regal authority, learn from my subjects themselves, such a precept as this, he would prosper by the grace of *Dhanmo*; should he not acquire that knowledge, he (cannot) prosper by the orthodox *Dhanmo*." The rája Pa'ndu, who is the delight of the déwos, has thus asked this (query). "He, who after the extinction of my authority, would not acquire this knowledge, how should he learn these royal mandates? how can he prosper by the orthodox *Dhanmo?* The well disposed person, (who) has prospered by the orthodox *Dhanmo*, would evince gratitude for the benevolence of his benefactors. (All) conforming, good men prosper by the orthodox *Dhanmo*, and realize the bliss of the eight heavens." The rája Pa'ndu, who is the delight of the déwos, has declared this also. "He who attends to this precept of mine, would by the observance of *Dhanmo* lead a righteous life. Let me also, by the observance of *Dhanmo*, attain an exalted station (of righteousness). The inhabitants at large, who conform to this edict, (will) eschew evil."

Translation of the Inscription fronting South.

The rája Pa'ndu, who is the delight of the déwos, has thus said.

"By me, who have attained the twenty-seventh year of my inauguration, these animals have been forbid to be killed,—namely, parrots and mainas *(gracula religiosa)* in the wilderness; the brahmany duck *(anas casaca)*; the goose (rather the mythological and fabulous "*hansa*"); the nandimuká (supposed to be the fabulous "*kinnari*"); the golden maina (*turdus salica,*); the bat, the crane, the blue pigeon, the gallinuli, the sankagamawé, wédawéyaká, the gangapuputhaká, the sankagamawé, the kaḍhathasayaká, the panarasé, the simaré, the sandiké, the rókapadá, the parasaté, the white dove, and the village dove, as well as all quadrupeds. These, let not the tribe of huntsmen eat. For the same reason, let not sheep and goats which are fed with stored provender, be slaughtered by any one; and those who are accustomed to receive a portion of the meat (of animals killed) should no longer enter into engagements to have them slaughtered on those terms; nor should ferocious animals either be destroyed; neither in sporting or in any other mode, nor even as a merriment, should they be killed: (on the contrary) by one living creature, other living creatures should be cherished. During (all) the three seasons of the year, on the full moon day of their (lunar months) as well as on these three days, the fourteenth, the fifteenth, and the first (of each moiety of the lunar months) (each of) these being days of religious observance, not only the agonies of slaughtering, but selling also should not be allowed. During these days, at least, on the mountain, in the wilderness, and everywhere, even the multitudes of the various species of animals which may be found disabled, should not be killed. During the three seasons, on the eighth, the fourteenth and the fifteenth (of each moiety of the lunar month) being the holy days devoted to deeds of piety, oxen, goats, sheep and pigs, which are ordinarily kept confined, as also the other species which are not kept confined, should not be restrained. Nor should it even be hinted, on the holydays of the four months of each of the seasons, that the stalled oxen even should be kept confined. By me, who have attained the twenty-seventh year of my inauguration, during the course of that period, living creatures have been released from the twenty evils (literally restraints) to which they were subjected."

The Inscription fronting West.

The rája Pa'ndu, who is the delight of the déwos, has thus said.

"This inscription on *Dhanmo* is recorded by me in the twenty-seventh year of my inauguration. My public functionaries intermingle among many hundred thousands of living creatures, as well as human beings. If any one of them should inflict injuries on the most alien of these beings, what advantage would there be in this my edict? (On the other hand) should these functionaries follow a line of conduct tending to allay alarm, they would confer prosperity and happiness on the people as well as on the country; and by such a benevolent procedure, they will acquire a knowledge of the condition both of the prosperous and of the wretched; and will, at the same time, prove to the people and the country that they have not departed from *Dhanmo*. Why should they inflict an injury either on a countryman of their own or on an alien? Should my functionaries act tyrannically, my people, loudly lamenting, will be appealing to me; and will appear also to have become alienated, (from the effects of orders enforced) by royal authority. Those ministers of mine, who proceed on circuit, so far from inflicting oppressions, should henceforth cherish them, as the infant in arms is cherished by the wet-nurse; and those experienced circuit ministers,

moreover, like unto the wet-nurse, should watch over the welfare of my child (the people). In such a procedure, my ministers would ensure perfect happiness to my realm."

"By such a course, these (the people) released from all disquietudes, and most fully conscious of their security, would devote themselves to their avocations. By the same procedure, on its being proclaimed that the grievous power of my ministers to inflict tortures is abolished, it would prove a worthy subject of joy, and be the established compact (law of the land). Let the criminal judges and executioners of sentences, (in the instances) of persons committed to prison, or who are sentenced to undergo specific punishments, without my special sanction, continue their judicial investigation for three days, till my decision be given. Let them also as regards the welfare of living creatures, attend to what affects their conservation, as well as their destruction: let them establish offerings: let them set aside animosity.

Hence those who observe, and who act up to these precepts would abstain from afflicting another. To the people also many blessings will result by living in *Dhanmo*. The merit resulting from charity would spontaneously manifest itself."

VI.—*Account and drawing of two Burmese Bells now placed in a Hindu temple in Upper India. By Capt.* R. Wroughton, *Revenue Surveyor, Agra division.*

In the month of January last, while engaged upon the revenue survey of zillah *Sirpurah*, I accidentally heard of a celebrated Burmese bell, in the possession of Resáladár Bheem Singh (late of the 2nd local horse) and lodged at a sewala, the property of that individual, situated in the village of *Nudrohee* on the banks of the *Kalee Nuddee*, $2\frac{1}{2}$ miles west from the town of *Khass Gunj*. I was induced to visit the spot, and recognized old acquaintances in the Resáladár and bell; the former having been engaged with me in the night storm of the city of *Arracan*; and the bell, the identical one, which was found upon the capture of that place suspended in the temple (or pagoda) of *Gaudama muni*, a few hundred yards to the N. E. of the old stone fort, being the position occupied by the 2nd regiment of local horse, during the calamitous rainy season of 1825.

The history of this bell is very unsatisfactory, and very brief. Upon the breaking up of the south-eastern division and the return of the troops to Bengal, Bheem Singh solicited permission to carry away the bell in question, and he states that consent was given to his application, both by the late respected General Morrison, and Mr. T. C. Robertson, Political Agent: upon what authority however, this proceeding can be justified, I know not, neither am I disposed to agitate

the question, because it might disturb its worthy owner in the possession of an article, which in its present position is well calculated to perpetuate the success of the Company's arms in Burmah, and to which BHEEM SINGH attaches the greatest value.

The Resáladár (an active fellow and gallant soldier) when the 2nd local horse marched from *Arracan* to *Chittagong*, by the interior, (or *Ruttnapulling* route,) contrived to persuade the master of a sloop to convey the bell to that station, where it arrived before its owner, was seized by the officer in charge of the magazine, and was only liberated and restored to BHEEM SINGH, consequent on a reference being made to the supreme government. From *Chittagong* the bell was conveyed in a country boat, to *Futtyghur*, and from that place was finally transported on a truck constructed for the occasion, to its present situation. The above comprises all the information I could gather from the Resáladár regarding it.

Nudrohee is fixed on the direct route from *Muttra* to *Soron* on the Ganges viâ *Hathras, Sikundruh raow*, and *Murarah*; thousands of pilgrims from the western states frequent this road, on their way to bathe in the Ganges, and by this means the celebrity of the bell has spread far and wide.

BHEEM SING having permitted me to examine the bell and make a drawing of it, I thought the opportunity a favorable one, and availed myself of his good humour and civility; and I was the more urged to take this trouble, as I consider the bell a beautiful specimen of workmanship, of great antiquity, and well worthy a report and representation being made of it.

Having constructed a wooden hollow parallelopepidon for the purpose, I ascertained that the solidity of the bell equalled a prism, the area of whose base is the square of 44.3 inches × by the height 6.278 which gives for the content 12320, 41222 cubic inches: the specific gravity of the metal which is a near approximation to the truth, I determined in the following manner.

Mr. JAMES GARDNER of *Khass Gunj* possesses a small Burmese bell, which was also brought round from *Arracan* by the late Lieut.-Col. GARDNER, and this bell the former gentleman kindly lent to me. I weighed it with English weights and scales (thermometer Farht. scale, ranging 60°) both in and out of water, and found it 224lbs. 4 ounces, and 195lbs. 12 ounces avoirdupois respectively, which makes its specific gravity 7868; its solidity I ascertained to be equal to a cylinder, the base of a diameter 17.4 inches and the height 3.2 inches which gives 760.920 cubic inches, and as the material, or the metal

of which the small bell is composed assimilates very closely with that of the large one, I have used it to determine the weight of the latter, and which I find by the simple rule of proportion is $31\frac{1}{3}$ hundred weight nearly.

The accompanying sketches I personally executed from scale and measurement, and can vouch for their critical resemblance to the originals; and the facsimile of the inscriptions I have carefully compared, and can pronounce with safety upon their accuracy. I may here mention that until I filled the crevices of the letters on the bell *with yellow ochre* (and I tried many other colors), I found it utterly impossible to distinguish, and copy faithfully the inscription through the tracing paper, although the paper was extremely thin, oiled, and rendered transparent for the purpose.

The representation of the small bell, has been executed on a somewhat larger scale, because I could not otherwise satisfactorily exhibit its mouldings.

I will not occupy your time with any further observations, the drawings and copy of inscriptions will speak for themselves; and if they be considered useful and acceptable to the Asiatic Society, the little trouble I have taken will be amply compensated.

I cannot however resist communicating the particulars of an attempt made by a native to impose upon me a feigned translation of the inscription, because the circumstance will shew how far the disposition of these people leads them to practise deception and roguery whenever opportunity offers, and they can hope to turn it to account.

I had offered a remuneration of two goldmohurs to any person who could, and was willing to translate the inscription, and I made this offer because I had heard that one or two Arracanese Mugs who came round to Bengal with Gardner's horse, were residing in the neighbourhood of *Khass Gunj* and could accomplish the task: I tried one man and found him incompetent, when a Tanjore brahmin who had come to this part of the country on a pilgrimage presented himself, declared his ability to undertake the office, and to convince me of his fitness, produced several specimens of a written character having a strong resemblance to Burmese; and which in my presence he appeared to read and write with facility. Flattering myself that I had found a clever and useful fellow, I at once set him to work on the large bell inscription; and attended on the following day at the sewala to see what progress had been made. I found that one sheet containing 10 lines, had been faithfully transcribed; and that the brah-

min had copied 4 more lines on the second sheet; the first I directed him to transcribe again on a new sheet, while I would complete the second. I now determined to put this brahmin's honesty to the test, and while the fellow was busily engaged at a distance from me, I entered one line on the second sheet, resembling the inscription, that is, the line contained Burmese letters throughout, which I had fancifully put together: to this line I added four or five others correctly traced, and then called the brahmin to translate the whole sheet. It amused me to find, that he read *my composition* and the Burmese, with equal readiness, and apparent confidence, but when I applied the copied inscription to the bell, and he perceived no resemblance in the copy to the original, and that I had gravelled his ingenious effort to delude and rob me, it would be difficult indeed to describe his discomfiture. He never for an instant endeavoured to deny the attempt at imposition, but coolly defended the proceeding on the grounds of poverty, and the almost certain prospect he entertained of escaping detection.

Note.—Having prepared the plates for this paper we have inserted them in the present volume, although we are unprepared to subjoin a copy and translate of the longer inscription, which however perfectly executed in facsimile has proved beyond Ratna Paula's power of deciphering, as well as that of Col. Burney and his Burmese Pandit now in Calcutta. By their advice I have sent it to Mr. Blundell at *Moulmein*, but after all nothing very interesting can be expected from a document of such a nature. The smaller inscription Col. Burney obligingly took in hand, and we have the pleasure to subjoin his note with the text in Burmese—the facsimile it is not necessary to lithograph.—Ed.

Inscription on the Small bell.

ဇေယျတ္ထု။ ဒေဝဒေဝိန်။ ရာဇရာဇိန်။ မဟာမဂဓိန်။ သိရိန္ဒရ။
လေါကမျက်ရှု။ သုံးလုမှန်ကင်း။ တရားမင်းသည်။ လေးစင်းသြ
ဃအာသဝတို့ဦးခုန်မွဲနှိမ် ။ ကုန်သောဝေနေယျသတ္တဝါအပေါင်း
တို့အားတရားတည်း ဟူသောအမြွက်ငြိမ်းဆေးတိုက်ကျွေး
တော်မူ၍ပရိနိဗ္ဗာန်စံယူတော်မူပြီး သည်နှံ့ကာလ။ ကြို
ကြိုက်ခဲ့ဖူးသောသာသနာတော်အတွင် ။ ဦးကြိုကြိုက်သ
ဖြင့်အသင့်နှစ်လုံးစွဲသုံးအမှန်သမျှညာဏ် သက်လွှိုသော

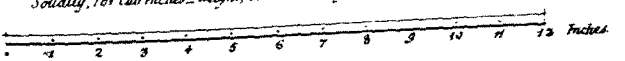
မောင်မှတ်သမိုး မောင်နုံသည်။ သန္ဒါ။ သိလ။ သုတ။ စာဂ။ စ
သော သူတော်ကောင်းတို့၏တရား ၌မွေ့လျော်သည်ဖြစ်၍ချ
မ်းမြေ့ကြည်လင်စွာသမျှဂဠိတိဂုဏ်လျက်။ သမုတ်ခါနုည်းတိုပြ
ည်ကြီးဝယ်ရေမိုးအစုံသောတန်ခိုး ဗျာဒိတ်ဟာ ခြောံဖျာသော
ရောင်ခြည်တော်စသောဂုဏ်နှင့်ပြည့်စုံတော်မူသောမွေတော်
တော်တော်တို့၏ကိန်း ဝပ်ရာဝေး ရာမဟာစေတီဘုရား ၌ကြွေး
ချိန် ၉၂ ဥသောင်း ဤခေါင်းလောင်းကိုအပေါင်းရေမြေသူနာရေ
အား သက်သေတည်ထားထိုင်ကြွေးလွှတ်ခါန်းပါ၏။ ။ဤသို့လွှတ်
ရသောကုသိုလ်အဘိုကိုလည်း ရေမြေသခင်။ လက်နှက်စ
ကြာအရှင်ဆန္ဒါနိုဆင်မင် ။ သခင်အဆျင်သဝအရှင်မင်း တ
ရား ကြီဘုရားမင်း မိဘုရားသားတော်မြေးတော်တို့အား အမှ
ဝေ၏။ မွေးသည်ဘခင်မိခင်ဆာသမားမှစ၍သုံးဆယ်တဘုံ
၌ကျင်လည်ကုန်သောဝေနေယသတ္တဝါအပေါင်း တို့အား အမှ
ဝေပါ၏။ ။ ဤသို့ပြုရတွှေ့ခါနုကြောင့်ဘဝနောင်လါသံသရာအ
ဆက်ဆက်တို့၌ကောင်း သောသုဂတိဘဝတို့၌လါ ။ သည်ဖြ
စ်၍ဒုစရိုက်တရား ဆယ်ပါး တို့ကိုကြည့်ရှောင်နိုင်သဖြင့်သ
သန္ဓမ္မတရား ဆယ်ပါ ။ တို့ကိုကျင့်ဆောင်သောယောံကျားမြ
တ်ဖြစ်၍အဆုံး စွန်သောဘဝ၌ခေမာပူရုန်ပြည်နိုင်ဗွာန်သို့အမှ
နဲ့ရောံရပါထိုသော။ ။ရတနာမဏ္ဍိုင်။ ၎ဆောင်ပြိုင်တွင်။ မြစိုင်တခို။တောင်ကွွန်း ဆိုသော ။မြန်တိုင်းအမရ ။နုန်းဒွါနုဝယ်။ စကြသခင်။ဆန္ဒါနိုရှင်ဟု။ဘုရင်ကြီးစစ်။ ဖြစ်လတ်သရော်



Rob.t Wroughton del.t

Small Burmese Bell, the property of James Gardner Esq. Khasgunj

Solidity, 761 cub Inches_ Weight, 2 Hundred Weight ... Specific Gravity 7868.





Counter View of the upper Portion of the small Bell.

Large Burmese Bell at. Vudrohee Ghat on Kalee Nuddee. Purg.ª Mararuh, zillah Allygurh. brought from Arracan by Bheem Singh Rusaldar 2d Loc.l Horse 1826.

Solidity 12320 Cub. Inches - Weight 31 ⅝ Hundred Weight

2 4 6 8 10 12 24 36 Inc.

။ထိုက်တော်၌။ ဂျင်တော်သသနာ။ ပွင့်လင်းသော၍။ သည်ဘ
ာန္တတ်။ဝစနတ်နှင့်။ မောင်မှတ်ခေါ်တွင်။ အိမ်ရှင်မကြီး။
ဇနီးရှင်အရှ။မောင်သူမယ်ယ။ မောင်နှစ်မတို့။ ဖြူဆွသဒ္ဓါ။စေ
တနာဖြင့်။ ဆောင်ရွက်။ဒသအာဠာ။နှစ်ကောဇါတွင်။ဆုသီ
ပြီသ။ဂိမ္ဗန္ဓာ၌။တွက်ဆသချေ၌။ ရက်အသင်္ဝယ်။သတ္တာဘိ
သ။ခါကောင်းရေ၍။ လန္ဓမဋ္ဌိယာ။ သန့်ပြန့်စွာနှင့်။ များစွာကံ
ကျွေး။လက်ခပေးလျက်။ ကြေးအသပြာ။၅၀သာ၍။သံဝါရိ
က်ညောင်း။ဒန် ခေါင်းလောင်းကို။ရင့် ကြောင်းဆယူ။ဤအ
လှူသည်။။နုတ်လူဖြဟွားကြည်ာ ရွှင်ညောင်သောင်း သော
င်းသာခုခေါ်စေသော။

"I send you a fair version, which some Burmese at Calcutta and I have succeeded in making out of the facsimile of the inscription on the small *Arracan* bell. We have been obliged to guess one or two words. I send you also a translation of the Burmese, from which you will see that the inscription, like most Burmese inscriptions, contains nothing of any historical interest.—H. B.

Translation.

Be victorious or accomplished[1]! After the period when the sovereign of the *nats*, the king of kings, the chief of the saints, the most beautiful in appearance, on whom the eyes of the whole world rest, the pinnacle of the three orders of rational beings[2], and the lord of righteousness, had administered the delicious and relief-giving medicine, the moral law, to all sentient beings who are long immersed in the four streams or currents[3], and had proceeded to enjoy the state of *Nuibban*, MAUNG MHAT and his wife, having come to existence in the time of (GAUDAMA'S) religion which is most difficult to meet with[4], possessing minds properly and sincerely disposed, imbued with true wisdom, taking delight in virtue, piety, charity, and the other duties of good men, and established in proper principles, made an offering, taking the whole earth and water to witness, of this bell weighing 9,23[illegible],000[5], to the *Maha Zedi* pagoda, which is situated in the place called the great city of *Dinawadi (Arracan)*, and in which are collected and rest the sacred relics (of GAUDAMA), that are complete in the united streams of fire and water, the six-colored flames of light and other miraculous exhibitions[6]. May the merit of this charitable gift

be also shared[7] by the lord of earth and water, the possessor of the celestial weapon[8], the master of the tshaddan[9] king of elephants, the arbiter of life and great king of righteousness (Mendaragyih, king of *Ava*, grandfather of the present king) his queen, sons and grandsons. May it be shared by the parents who gave (us) life, (our) teachers and all sentient beings who pass through the thirty-one different stages of existence[10]. (We) desire that in consequence of (our) having thus performed this charitable deed, (we) may, in future successive worlds, exist as good beings in the superior grade of man[11], capable of avoiding the ten evil works[12], and given to performing the ten good works[13], and that in (our) last state of existence, (we) may verily reach the country of *Khemapuran Nuibban*.

In Verse.

During the reign of the lord of the celestial weapon, master of the tshaddan elephant and the true great king, who resides at the royal city of *Amarapura* in the Burmese kingdom, which is situated upon that called the southern island, lying within the green division of the four bodies of color that issue joined together from the precious centre post[14], the religion of the lord was extended and prosperous. In the warm season, on what was fixed by astrological calculation to be a prosperous day, the 27th day of the sign Taurus, (Burmese month Katshoun) in the Kauza[15] æra 1180 (corresponding with the 2nd of May, 1818), I, known as, and significantly called by the name of Maung Mhat[16], the mistress of my house Ma Gyih and wife Shyen-u, (two wives) and brother and sister, Maung Thu and Maya (his two children) have, after paying much, upwards of 50[17] viss, for the hire of labourers, bestowed with pure motives and good will, in view to obtaining the reward (of *Nuibban*) through perfection in virtue, this bell, the sound of which when struck extends afar and makes the ear attend. May nats, men and byamhas, above and below, listen to it with delight and cry aloud well done[18]!

[1] The Burmese often commence a writing with the *Páli* phrase *zeyatu*—which is usually interpreted by them to mean, "May it (the work now undertaken) be completed or fulfilled," but which, some pious Burmese say, rather means, "may they (the evil passions) be overcome," or "Be victorious over the evil passions." [It is simply the Sanskrit जयतु 'be victorious.'—Ed.]

[2] The three superior orders of beings are, *Byamhas*, superior celestial beings; *Nats* inferior ditto, and men.

[3] According to the Burmese, there are four streams or currents that bear away all sentient beings, viz.: passion, existence, false doctrine and ignorance. These are also called four restraints or bands.

[4] The term of Gaudama's religion, it is said, is 5000 years, and Buddhists think that to appear in a state of existence as a human being during this short term is a difficult and fortunate event to a sentient being.

[5] The figures here are not quite clear, and an examination of the bell itself is necessary to ascertain to which description of weight they refer. If the figures are 9,230,000, they probably mean the small Burmese weight yue, 120 of which

go to the tical, and the weight of the bell will then be 76,916 ticals, 6 mus and 5 yues.

[6] GAUDAMA'S body displayed many miraculous appearances. He could, whenever he pleased, exhibit a stream of water from one nostril, eye, ear, hand, or foot, and a stream of fire from the other—and six streams of different colored glory were emitted from his body.

[7] According to the Burmese the merit of a good deed may be participated by others, and particularly by those who praise or encourage the performer of it by exclaiming *thadu*, well done.

[8] The Hindu *chakri* is the Burmese *tsakyá*, or celestial weapon.

[9] The Tshaddan elephant is now the usual title of the white elephant, which, in ancient times, when there existed, it is said, ten different species of the animal, was the king or of the first class. Six-colored streams of light issued from its tusks also, whence *tsha-dant* or *tshaddan*, as my poor unfortunate friend, the late MYAWADI WUNGYIH, informed me.

[10] The thirty-one different abodes or stages of existence, according to the Buddhists, have been described by Dr. BUCHANAN and other writers on their religion.

[11] A person, according to the Buddhists, cannot attain *Naibban* or be perfected into a Buddh but from a state of existence as man—hence, all Buddhists, and particularly the women, pray that their future existence may be in the superior grade of man.

[12] The ten evil works are 1, murder; 2, theft; 3, adultery; 4, lying; 5, speaking so as to destroy the affection entertained by two persons for each other; 6, speaking harshly or using abusive language; 7, frivolous or idle conversation; 8, coveting the property of others; 9, thinking of injuring others; 10, apostacy.

[13] The ten good works are 1, charity; 2, keeping the five Buddhist commandments not to kill, steal, commit adultery, use intoxicating substances or tell falsehoods; 3, repeating certain short sentences calculated to restrain evil desires and promote abstraction and indifference to this life; 4, reverence for Buddh, his precepts and disciples, and for one's parents and teachers; 5, performing the services due to the same; 6, distributing the merit of one's good actions among other beings; 7, pleased with, and exclaiming *thadu*, or well done, at the good works of others; 8, hearing GAUDAMA'S religious precepts recited; 9, preaching or communicating a knowledge of the same to others; 10, firmness in religious faith.

[14] The Myenmo Mount is here poetically alluded to. From the four cardinal points of this centre of the Buddhist world to the wall surrounding it, the space is equally divided by four different colors, red, green, yellow and white. In the green space is situated the southern island or *Tsabu-depa*.

[15] The present Burmese æra which commenced A. D. 638.

The number of the year is so given in the verse, that it was at first supposed to be 1118 or 1756, but that date was 27 years before *Arracan* was conquered or *Amarapura* built by MENDARAGYIH, king of *Ava*. Further examination with Burmese satisfied me that the year is 1180 or 1818.

[16] Mhat in Burmese means mark, and the bestower of this bell appears to have been born with some mark or discoloration about his body, whence he was named Mhat or Mark. The verse on the bell may be understood to mean that the donor was mark by nature and Mark by name.

[17] Here again the meaning of the figures is not quite clear, whether referring to the weight of the bell or to the amount of expense incurred.

[18] See note 7.

The last part of the inscription is in verse. Burmese verse consists of four syllables or five pronounced as four. The last syllable or last letter of one verse and the third or second syllable, or last letter of the third or second syllable, of the next verse, or of the two next verses, are made to chime together, and the last syllable or final letter in the last syllable of the last of these verses is often again connected by the same kind of rhyme with the following verses:—e. g.

* Yatana man *daing*[1] || Le yaung py*aing*[2] dweng || mya *zaing*[3] ta kho[1] || taung kyun ts*ho*[2] thau || myan daing amá*ra*[1] || nan thaná[2] way || Tsaky*a*[3] tha kh*en*[1] || tshaddan shy*en*[2] hu Bhui*en*[3] gyih ts*it*[1] || phy*it*[2] lat thar*áu* || let[2] thek d*au*[3] nhait || shyen d*au*[3] tha thana || &c.

The verse is written like prose excepting at the end of each verse there is a *paik* or stop, a double line, like that above shown. The Burmese have an immense collection of poetry and take great pleasure in reciting it, and I have heard my amiable friend, the Catholic Missionary Père Tarolli, admire their poetry exceedingly, declaring that some, which he once read to me, was equal to any thing in Danté !

VII.—*Note on Inscriptions at Udayagiri and Khandgiri in Cuttack, in the lát character. By* Jas. Prinsep, *Sec. As. Soc. &c.*

I have already mentioned that on Lieutenant Kittoe's departure for *Cuttack* I requested him to take the first opportunity of visiting the *Khandgiri* rock for the purpose of re-examining the inscription of which a lithograph was published by Mr. Stirling in his Statistical Report on the province of *Orissa*.

My zealous friend saw enough, several months ago on a rapid visit there, to prove that the published copy was very incorrect; but it was only lately that he was able to repair to the spot again (a distance of 20 miles from *Cuttack)* to examine and copy the document in detail. I shall presently quote his own account of the difficulties he had to encounter in accomplishing the task I had imposed on his zeal and good nature;—but first I would call attention to a number of short inscriptions in the old character which he discovered on the occasion of his first visit, in the various caves of the neighbouring hill called *Udayagiri;* and which he carefully recompared on his late trip, so as to leave no doubt of their accuracy as now represented in Plate LVII.

from his original sketches. It will be remarked that some of them are accompanied by symbols similar to those of the western caves in Colonel SYKES's collection; but they are frequently destitute of such ornaments, and the general style of the writing is of a purer and therefore more ancient type than that of *Sainhadri*.

In my search for some of the catch-words which had proved of such avail in explaining the purport of the inscriptions at *Bhilsa* and *Sainhadri*, I could neither meet with the *dánam* of the former, nor the *dayadhamma* of the latter,—but in their stead I remarked a very common if not constant termination in a word of two syllables  *lonam*, or  *lenam* preceded in most instances by the genitival affix  *sa;* and in the only case, as of exception, by an equally regular genitive  *siríno*, from the noun *síri* (Sanskrit root श्री gen. श्रीणः): a worshipper of the sun. It was not until after many futile attempts with the pandit to find a better, that we were led to the supposition that the words *lonam* or *lenam*, must be the Páli equivalent for the Sanskrit participial noun लूनं *lúnam*, 'cut or excavated;' in this the vowel is changed from *u* to *o*, and the *n* from the dental to the Prákrit cerebral:—but in sound it must be confessed that there is little difference; while in sense, the term satisfies precisely the circumstances of the *Udayagiri* caves, which are generally small holes cut with the chisel from the solid rock—a stone of loose consistency easily worked with the rudest tools.

The catch-word once attained, the reading of this new string of inscriptions was an easy matter.

The first then, which occurs in a cave now called the "snake cave" at *Udayagiri* (hill of the rising sun) reads thus:

No. 1. *Chúlakamasa Koṭhájayácha.*

"The impregnable or unequalled chamber of CHULAKARMA."

Koṭha is precisely the कोष्ठ *koshtha* 'an apartment.' The conjunction *cha* shews that the sense is incomplete, but the continuation on the sides of the same door (No. 2) is in bad preservation; viz.

No. 2. *Kamase... rikhi nayache pasáde.*

"and the appropriate temple (or palace) of *Karma*.... (*rishi?*)" only changing *pasádah* 'favor' into *pásádah* (S. प्रासादः) palace.

No. 3, on the cave now called that of the tiger, reads as follows:

Ugara avedasa sasuvino lonam.

"excavated by (of) UGRA AVEDA (the antivedist) (?) the *sasuvin*"

No. 4, on an adjoining cave is equally unintelligible.

Mápámadáti bákáya yanákiyasa lonam.

"The excavation of YANA'KIYA for....."

No. 5, commences and ends with the same words as the first inscription:

Chúlakumasa paseta kothája (ya).....

The word *paseta* may be the Sanskrit *prasrita* "the humble" sc.—cell of CHULAKAMA.—*Chuḍakarma* is the rite of tonsure—from चूडा, a single lock of hair left on the crown of the head when shaved: and some allusion to a similar purpose of this cave seems preserved in its modern name of *páwanagubha*, 'the cave of purification.'

No. 6, is on a cave now called the *Mánikpúra* or jewel-city cave. It begins and ends very intelligibly, but the central portion is erased: *Virasa mahárájasa kalingádhipatano ma ..... kadepa síríno lonam.*

"The excavation of the mighty (or of VIRA) sovereign, the lord of *Kalinga*, &c..... of Kadepa (?) the worshipper of the sun."

In Sanskrit,—वीरस्य महाराजस्य कालिङ्गाधीपति... कदेप सौरिण: लूनं

VIRA may perhaps be the name of the rája of *Kalinga* who dug this cave: for *síríno*—see the previous observations.

No. 7, over a small door in the same cave, seems to have been the work of a more youthful prince.

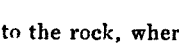
Kumaro vattakasa lonam.

"The excavation of the prince VATTAKA."

Then follows a more lengthy inscription (No. 8) on the *Vaikanta gubha* in which we also find mention of the *Kalinga* dynasty.

Arahanta-pasádánam kalinga..ya....nánam lonakáḍatam rajinolasa .. hethisahasam panotasaya..kalinga velasa..agamahi pitakaḍa.

"Excavation of the (rájas) of *Kalinga*, enjoying the favor of the *arhantas* (Buddhist saints)—(the rest is too much mutilated to be read with any degree of confidence.)

There is still one more specimen of the old character in a cave at *Khandgiri* not inserted in the plate: it runs 

páda mulikase kutamasa lonam.

"excavated by KUTAMA (GOTAMA?) the *pádamaulika* (having the feet (of Buddha) on his head) alias the devout."

The above inscriptions are all cut deeply into the rock, whereas the modern Sanskrit ones which occupy the remainder of the plate are rudely scratched upon the stone, and are yet more difficult to decipher.

They are of two distinct ages:—Nos. 2 to 11 from the style of some of the letters belong to the fifth or sixth century, whereas No. 1 in the *Kutila* character, cannot be dated further back than the tenth century.

Being of brahmanical tendency they naturally give a new account of the origin and objects of the caves; but the indistinctness of the writing

prevents our getting completely at their meaning. The language is of course no longer Páli but Sanskrit.

No. 1. श्रोशाधिकारसौराज्यादाचन्द्रार्कं
मुद्दा गर्भस्थ देवजमुनेः प्रभीस्थ
रस्य विरजा (क्षेत्रे) ॥ इज्या गर्भे समु
द्भवानन्त तस्य सवाभिषक् भमदा
योरण धान्यवस सम्वत्सरन्मुनि ॥

"Under the fortunate government of an equitable prince this cavern (was excavated)—to endure as long as the sun and moon—for the heaven-born munis —(or holy ascetics), in the *viraja khetra* (or holy precincts) of the lord of gods (Jagannath), as a cave of sacrifice *(ijya garbha)*..... In the *samvat* year nine—(*muni*)."

It is a curious fact that all the inscriptions in this comparatively modern character found on the eastern side of India bear *samvat* dates, either in an era unknown, or in the mere reign of the existing sovereign ; so that little advantage can be taken of them in fixing the epoch of what they commemorate. The word *muni* here attached to *samvatsare* is used numerically for 'nine,' that being the number of the sages. The name of the king under whose just rule the elephant cave was formed into a sacrifice cave connected with the worship of *Prabhiswara*, or JAGANNATH, does not clearly appear.

The fragments (figs. 2 to 11) carelessly cut on various parts of the caves are for the most part imperfectly legible.—They are in all probability merely the names of visitors as at *Allahabad, Gaya,* &c. The word होते *hotta,* 'a burnt-offering,' occurs in Nos. 3 and 6. No. 8 contains the name KUVERA'GNI, and No. 10 the title *Uttamakula vansa,* 'descendant of an illustrious family.'—It is unnecessary to dwell upon the reading of the rest, in which many letters and detached syllables might be easily transcribed, because they carry with them no trait of interest further than the fact, that the same transitions of the written character visible elsewhere are equally developed in the remains of these *Kalinga* monuments.

We now arrive at the more elaborate and curious document from the same neighbourhood which was the subject of Mr. STIRLING's remarks alluded to in a preceding page. I cannot begin better than by inserting in his own words Mr. KITTOE's

Note on the Khandgiri Inscriptions.

"At your request I visited the caves of *Khandgiri* in March last, for the purpose of examining the inscription mentioned by Mr. STIRLING

in his statistics of *Orissa*, of which a plate is given in the 15th volume, of the Researches*.

* As few of my readers have an opportunity of seeing the Researches, I extract the following description of these caves and of the main inscription from Mr. Stirling's Report on *Orissa*, in the 15th volume.—Ed.

"About five miles west of *Bhobanésar*, near the village of *Jaymara*, in the *Char Sudhi Khandaiti* of *Khurda*, and still within the limits of the *Khetr*, a group of small hills occur, four in number, from one hundred and fifty to two hundred feet in height, which present many objects of interest and curiosity. These hills called severally the *Udaya Giri*, *Dewal Giri*, *Nil Giri*, and *Khand Giri*, (by which latter name the spot is now generally designated,) are composed of a silicious sandstone of various color and texture, and are all curiously perforated with small caves, disposed in two or three irregular stories. Each of the caves is large enough to contain from one to two human beings in a sitting posture. Some of them appear to be natural cavities, slightly improved by the hand of man; others have obviously been excavated altogether artificially; and the whole are grotesquely carved and embellished. In one part, a protecting mass of rock has been cut into the form of a tiger's head, with the jaws widely distended, through which a passage lies into a small hole at the back secured by a wooden door, the residence of a pious ascetic of the Vyshnavite sect. The ridiculous legend which the natives relate to explain the origin of these isolated hills, is, that they formerly constituted a part of the *Himalaya*, at which time they were inhabited by numerous Rishis, who dug the caves now found in them. They were taken up bodily, ascetics and all, by Maha'bi'r Hanuma'n, with other masses of rock, to build the bridge of *Rama*, but, by some accident, were allowed to drop in their passage through the air, when they alighted in their present position. I am almost tempted to add, as a curious coincidence, that they are the only real sandstone hills found in this part of the country; but the geology of the district has not been sufficiently explored, to warrant my advancing such an assertion positively. The summit of the highest rock, is crowned by a neat stone temple of modern construction, sacred to the worship of *Parasnath*: all around, and in the neighbourhood of which, are strewed a quantity of images of the nirvánas, or naked figures worshipped by the Jain sect, executed chiefly in the grey chlorite slate rock. At the back of these temples, a highly remarkable terrace is shewn, called the *Deo Sabhá*, or assembly of the gods, which is covered with numberless antique-looking stone pillars or temples in miniature, some standing, others lying on the ground, about two or three feet long, having, on each of the four sides, a figure of the naked Jain deity rudely sculptured. The place is still frequented by the Jain of Parwár merchants or *Cuttack*, who assemble here in numbers, once every year, to hold a festival of their religion. A short way up the *Udaya Giri* hill, the nour or palace of the famous rája Lalut Indra Kesari, is pointed out as the chief curiosity of the place. It consists of a sort of open court formed a perpendicular face of sandstone rock, about forty feet in height, with shoulders of the same projecting on either side. Rows of small chambers have been excavated in each face, arranged in two stories and divided by a projecting terrace. Both the exterior surface and the inner walls of the chambers are decorated with cornices, pilasters, figures, and various devi-

I discovered at once the incorrectness of the facsimile, moreover that it was only of part of a very extensive inscription.

I found a great many smaller inscriptions in the different caves all of which I transcribed. (See the preceding notice.)

Having no means of erecting a scaffolding, added to the limited leave granted me, I was obliged to defer the agreeable task of copying the great inscription till a future opportunity, which unfortunate circumstances prevented till the latter end of November, when having previously sent on people to make preparations I followed by dawk. After a whole day's hard work, I transcribed the most part of the great inscription and re-compared all the minor ones; I worked for upwards of an hour by torch-light and returned to cantonments, having travelled 38 miles out and home again.

ces very rudely sculptured, and the whole exhibits a faint and humble resemblance, in miniature, to the celebrated cavern temples in the south-west of India. The rude and miserable apartments of the *palace*, are now occupied by byragis and mendicants of different sects, who state that the place had its origin in the time of BUDDHA, and that it was last inhabited by the ráni of the famous rája LALAT INDRA KESARI, a favourer of the Buddhist religion. Many odd fables are related of the scrapes into which she was led by her heretical notions, and of the way in which her conversion to the orthodox system of worship was at last effected.

Farther up the same hill, on the overhanging brow of a large cavern, one meets with an ancient inscription cut out of the sandstone rock, in the very identical character which occurs on the pillars at Delhi, and which as yet has been only very partially decyphered. Having been enabled to obtain an exact facsimile of this interesting monument by the assistance of Colonel MACKENZIE, whom I conducted to the spot in 1820, I shall annex the same to the Appendix of this paper. There are I think two eminently remarkable circumstances connected with the character used in the above inscription. The first is the close resemblance of some of the letters to those of the Greek alphabet, and the second the occurrence of it on sundry ancient monuments situated in widely distant quarters of India. In support of the first assertion, I need only point the attention of the reader to those of the characters which are exactly similar to the Greek on, sigma, lambda, chi, delta, epsilon, and a something closely resembling the figure of the digamma. With regard to the second, any reader who will take the trouble of comparing the *Khand Giri* inscription with that on FEROZ SHAH's lát at *Delhi*, on the column at *Allahabad*, on the lát at *Bhim Sen*, in *Sarun*, a part of the elephanta and a part of the *Ellora* inscriptions, will find that the characters are identically the same. A portion of the *Ellora* and *Salsette* inscription written in the above character, has been decyphered by the learning and ingenuity of Major WELFORD, aided by the discovery of a key to the unravelling of ancient inscriptions in the possession of a learned brahmin, vide the eleventh article of Vol. V. Asiatic Researches; and it is to be regretted that the same has not been further applied to decyphering the *Delhi* and other

I prepared a copy of my work (on a large scale) in pale ink, and again returned to *Khandgiri* on the 18th of December; I compared this copy with the original, correcting all errors with ink of a darker shade, and completed such parts as had remained unfinished on the former trip. This I accomplished in eight hours and returned the same day viâ *Bobaneswar* to *Cuttack*.

I had again occasion to observe the great advantage of performing such work towards sunrise, and more particularly about sunset. The degree of light at that time being most favorable, faint letters which in the glare of noonday are not perceptible become clearly so then: I would observe however that I always mark such letters with dotted lines, as are doubtful.

The nature of the stone at *Khandgiri*, *Dhauli**, and of the *Bobaneswar* temples is such as to render it quite impossible to take off facsimiles, as will be seen by the specimens of the different rocks†.

characters. The solution attempted by the Père Trieffenthaler, does not seem to me to meet any attention‡. The natives of the district can give no explanation whatever on the subject. The brahmins refer the inscription with shuddering and disgust, to the *Budh ka Amel*, or time when the Buddhist doctrines prevailed, and are reluctant even to speak on the subject. I have in vain also applied to the Jains of the district for an explanation. I cannot however divest myself of the notion that the character has some connection with the ancient Prákrit, and considering that it occurs in a spot for many ages consecrated to the worship of Parasnath, which the brahmins are pleased to confound with the Buddhist religion, and that the figure and characteristic mark which appears in company with it, thus ☩ does in some sort seem to identify it with the former worship; I am persuaded that a full explanation is to be looked for only from some of the learned of the Jain sect."

* We have not yet been able to insert the facsimiles of the *Dhauli*.

† The rock is a coarse sandstone grit, or shingle conglomerate.—Ed.

‡ He says, speaking of Feroz Shah's pillar: Apres avoir beaucoup et long temps cherché j'ai trouvé la signification de ces caracteres. Ce sont en partie des signes numeriques, en partie des figures d'instrumens de guerre dont les Indiens se servaient autrefois. ⅄ est le caractère du nombre huit: 8 celui du numbre quatre, O designe le sceptre de Rama jointa △ un globe; N désigne la figure d'une charrue que etait autrefois un instrument de guerre chez les Indiens. X a de la resemblance avec la lettre qui signifie C ou K: il est plus probable cependant que cette figure de *dix* Roman ou Ch Grec désigne une fleure à quatre feuilles dont les gentils employent quelque fois le figure pour servir á l'interponctuation des mots; △ triangle qui est la déesse, Bavani; ∈ est la caractere du nombre 6. E enfin désigne une espece de pallebarde avec laquelle Ram couchee sur le carreau un geant á mille bras. Des que ces caractères out de la resemblance avec les caractéres Grecs, quelques Européens ont cru que cet obelisque avait été elevé par Alexander le grand: mais c'est une erreur, &c.

The hillocks of *Khandgiri* and *Udayagiri* form part of a belt of sandstone rock, which, skirting the base of the granite hills of *Orissa*, extends from *Autgur* and *Dekkunál* (in a southerly direction) past *Kúrdá* and towards the *Chilka* lake, occasionally protruding through the beds of laterite.

Khandgiri is four miles northwest of *Bobaneswar*, and nineteen southwest of *Cuttack*.

The two rocks are separated by a narrow glen about 100 yards in width.

Khandgiri has but few caves on the summit. There is a Jain temple of modern construction, it having been built during the Maharatta rule. There are traces of former buildings ; I am inclined therefore to think that the present temple occupies the site of a *Chaitya*.

There is a tank hewn out of the rock on the eastern face of the hill which is held sacred by the Hindus as well as the Jains. This probably may be the "*Sitala taḍága*" alluded to in the inscription.

Udayagiri is entirely perforated with small caves on its southern brow. The natives have a tradition that there were formerly 752, exclusive of those now called *Lálhat Indra Keshari's nour*. A great many still remain perfect ; none are of any size ; they are mostly small chambers about 6 feet by 4, and from 4 to 6 feet high, with verandahs in front and small doorways to them hewn out of the solid rock. Several are cut out of detached blocks in fantastic shapes, such as the snake cave, and tiger cave, &c. There is much rude sculpture in some of the caves representing battles, processions, the worship of the holy tree, &c. : there are many elephants represented in basso relievo also detached of yore.

A great number of caves were destroyed for materials to build the Jain temple, and it appears that the rest have suffered during the wars between the Brahmans and Buddhists in remote ages, since which the spot has been occupied by ascetics of the brahminical faith.

Stone has been quarried here to build the temples of *Bobaneswar* when probably many caves were destroyed, as well as the buildings of which so many vestiges are to be found in the jangal around.

It will ever be a matter of regret that I was unable from want of leisure to make drawings of the sculpture and plans of this extraordinary place.

Before I conclude this note I must remark on the ingenious method which had been adopted to drain the chambers, which from the porous nature of the stone would otherwise have dripped in wet weather : small grooves are cut along the ceilings all verging to one point

at the lower corner, where a perforation is made to conduct the water without.

The great inscription is cut over the entrance of the largest cave called *Hathí Gúmpha*, and occupies a space of 75 square feet."

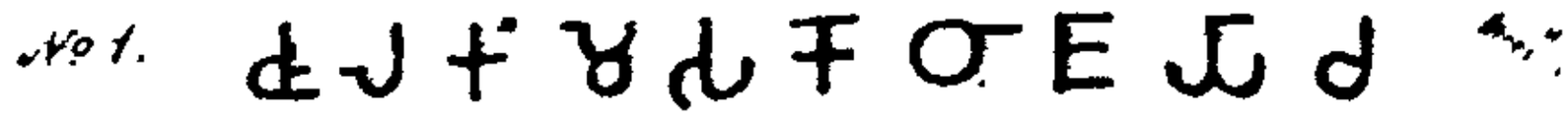
Nothing short of an impression (and from the nature of the rock an impression was impossible) could surpass in fidelity Mr. Kittoe's twice-compared facsimile, which is given on a reduced scale in plate LVIII. The only liberty taken by the transcriber is in arranging the lines parallel and even, whereas on the stone they run very irregularly as represented in Stirling's lithograph. Want of space also has made me crowd the letters in the lithograph too much, to the abridgment of the spaces which in the original most usefully mark the conclusion of each compound word.

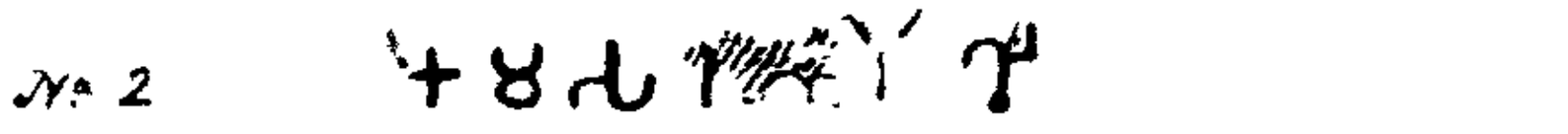
One prominent distinction in the alphabetical character would lead to the supposition of its posteriority to that of the *láṭs*, but that the same is observable at *Girnár:* I allude to the adoption of a separate symbol for the letter *r* (|) instead of confounding it with *l* (⌋). Hence also it should be later than the *Gaya* inscription, which spells *Dasaratha* with an *l*,—*(dasalathena)*. There are a few minor changes in the shape of the *v, t, p* and *g;* and in the mode of applying the vowel marks centrally on the letters, as in the *m* of *namo* ; the letter *gh* is also used : but in other respects the alphabet accords entirely with its prototype, and is decidedly anterior to the modifications just observed in the *Sainhadri* cave inscriptions.

The opening words of the inscription command our curiosity from the introduction of a regular invocation, in lieu of the abrupt style of Asoka's edicts. *Namo arahantánam namo sava sidhánam!* "salutation (or glory) to the *arhantas*, glory to all the saints; (or those who have attained final emancipation!)" These words evidently betoken a more matured and priestly style of composition. It should also be noted that the termination in *ánam*, which in Sanskrit only belongs to the genitive plural, in Páli serves also for the dative—the Sanskrit would be नमः अर्हते नमः सर्व सिद्धे ; the orthography of the text, however, differs materially from that of the modern Páli.

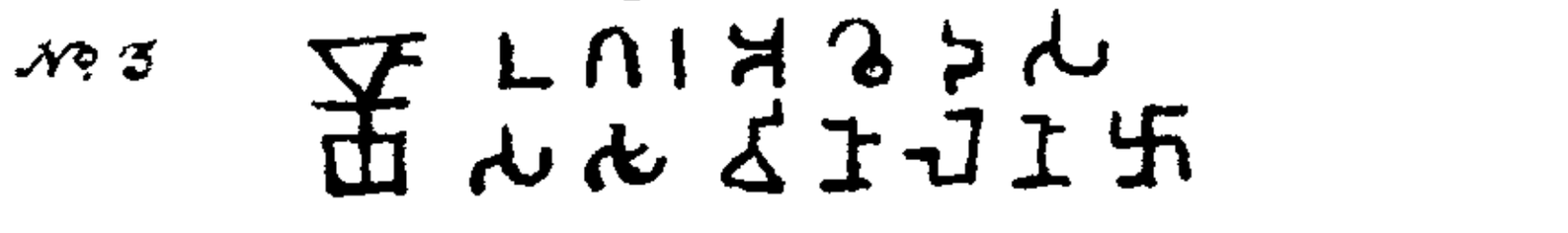
The next words, *Airena mahárájena mahámeghaváhanena chetakájate.. chhadhanena pasathasukelakhanena chaṭurantalathaganena,* are almost pure Sanskrit,—ऐरेण महाराजेन महामेघवाहनेन चैत्यकार्यचेतनाच्छधनेन प्रसस्तशुक्लच्छणेन चतुरान्तरस्थागुणेन,—' by Aira the great king,—borne on his mighty cloud-chariot,—rich in possession of the purest wealth of heart and desire,—of exceeding personal beauty,—having an army of undaunted courage.'

Dhárá cave.

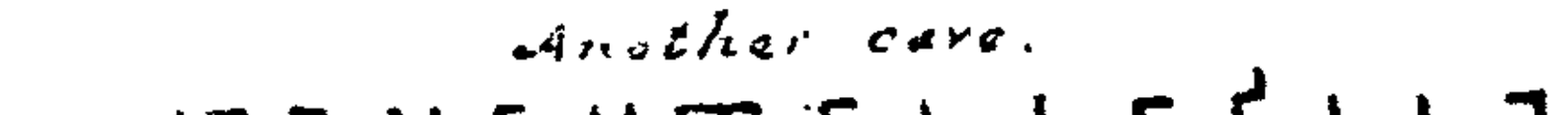
No 1. 

No 2 

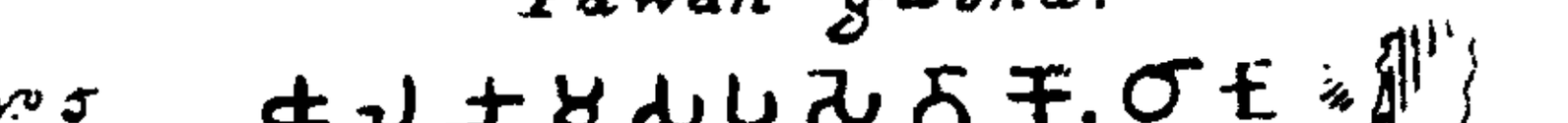
Tiger cave.

No 3 

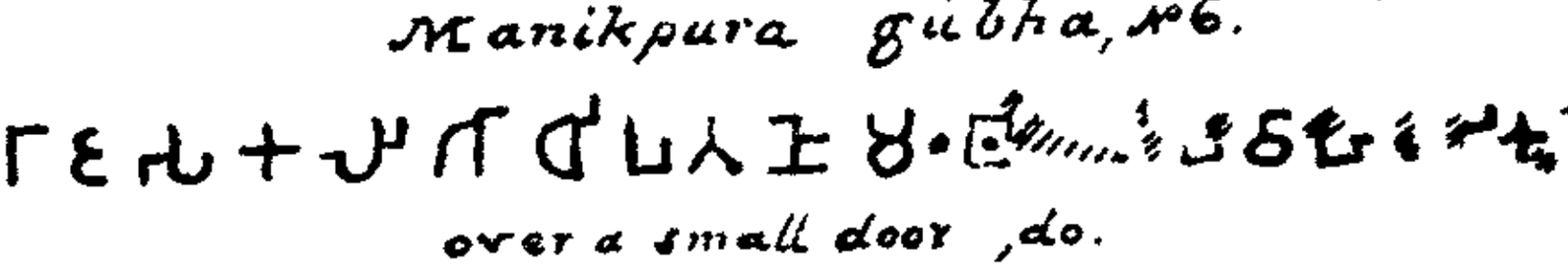
Another cave.

No 4. 

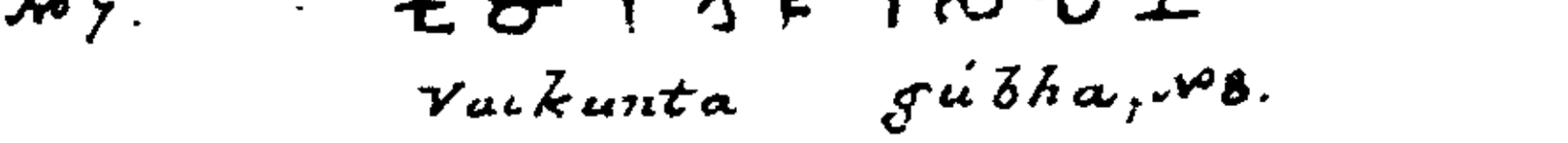
Páwan gúbha.

No 5 

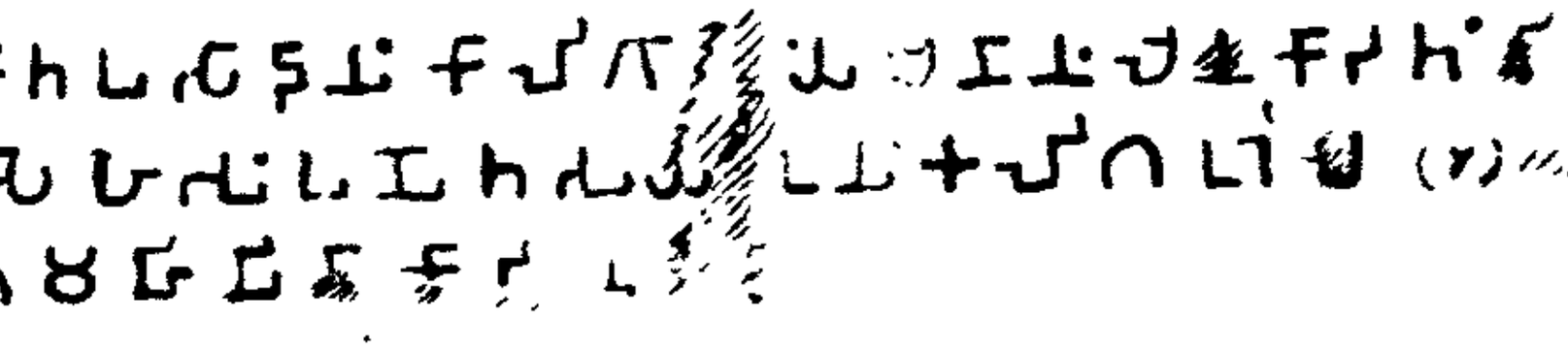
Manikpura gúbha, No 6.



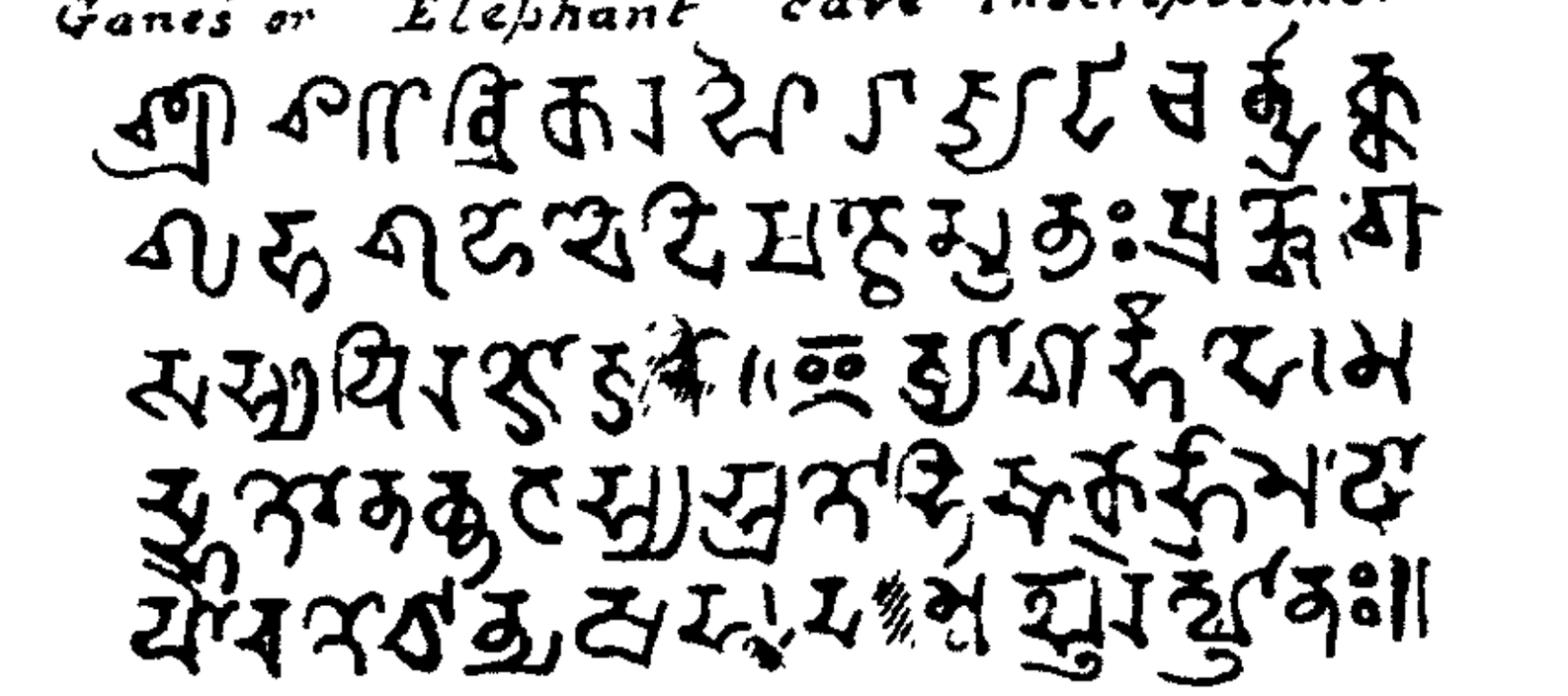
over a small door, do.

No 7. 

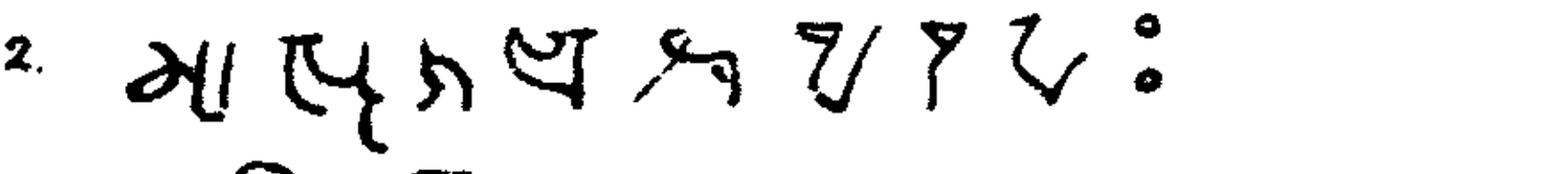
Vaikunta gúbha, No 8.



Ganés or Elephant cave inscriptions.

No 1 

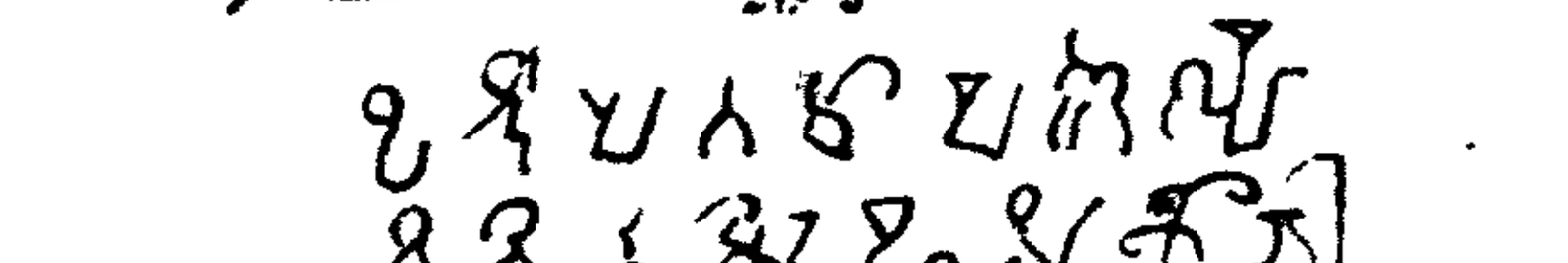
Rough inscriptions from different parts of the same cave

No 2. 

No 3 

No 4

No 5



No 6

No 7.

No 8

J. Prinsep Lith.

The concluding words of the first line are clear in import though slightly erased.. *kalingádhipa tirási sikhira avalonam,* .. " by him (was made) the excavation of the eighty-three rocky peaks of *Kalinga dwipa.*" If objection be taken against reading *dhipa* as *dwipa,* by altering the *rá* to *ná,* we shall have the preferable reading—*Kalingádhipatiná-ási sikharávalonam,*—' by him the king of *Kalinga, &c. was* this rock excavation (made) ;'—*avalonam* is formed from the word लुन before explained.

The second and third lines, owing to the same projecting ledge of stone which has so fortunately sheltered the upper line from the destructive influence of the rain through so many ages, are equally well preserved. In Roman characters they may be thus transcribed:—*Pandarasa vasáni siri-kaḍara-saríravatá, kídita-kumára-kídiká, tato lekharúpa-gaṇa-náva-vapára-vidhi-visáradena sava-vijávadátena navavasáni, hota raja pansásivasè, púna chavavísati vase dánava-dhamena sèsayovenábhivijayo tatiye Kalinga-rája-vansa-puri sanyuge, mahárájàbhisechanam páṇunáti.* For the sake of further perspicuity the same passage here follows in pure Sanskrit, which requires very slight alteration:

पञ्चदश वर्षाणि श्रीकडार शरीरवता क्रीडिता कुमार क्रीडिका ततो लेख रूप गण नाव व्यापार विधि विशारदेन सर्वविद्यावदातेन नववर्षाणि भूतराज पञ्चाशीतिवर्षे पुनश्चतुर्विंशति वर्षे दानधर्मेण शेषयौवनेनाभि विजयःतृतीयः कलिङ्ग राजवंशपुरि संयुगे महाराजाभिषेचनं प्रपूणाति।

" (By him) possessed of a comely form* at the age of fifteen years,—then joining in youthful sports,—afterwards for nine years engaged in mastering the arts of reading and writing, arithmetic, navigation, commerce, and law ;—and resplendent in all knowledge ;—(the former rája being then in his eighty-fifth year) thus at the age of twenty-four, full of wisdom and uprightness and on the verge of manhood (lit. the remainder of youth) (through him) does a third victory, in the battle of the city of the Kalinga royal family, sanctify the accession (anointment) of the mahárája." In this the only doubtful points to my mind are whether *Vijaya* should be understood as ' victory' or as a proper name, VIJAYA the third, (*yo* is written *po* in the text:)—and whether *sésha yovena* (S. *yauvanena*) should not be *asesha yodhena,* ' having a numerous army.' The immediate consequence of his accession is related in the next passage :

Abhisitamato vapadhammavase vatavihatato pura-pákára nivesam patisankhárayati.

* *Kaḍara sarira* signifies ' tawny body :'—*Srí kaḍára* again may denote ' the servant of SRI',' the goddess of beauty.

"Upon his accession choosing the brahmanical faith (विप्रधर्मवशः ?) he causes to be repaired (संस्कारयति) the city, walls, and houses (that had been) destroyed by a storm (वातविक्षतः)" and further, proceeding sentence by sentence, in the same strain :

Kalinga nagari khidhira sitala tadága pariyo cha bathupayani sava yánipati santhapa(nam)cha kárayati.

"For the poor (or ascetics) of Kalinga (खिदिर) a reservoir of cool water and a ghát (?) also presents of every necessary (वस्तूपयणि) and equipages he makes permanent endowment of," (संस्थापनं कारयति).

The next sentence is equally capable of explanation with a very few alterations—*panatisirásíhi satasahasehi pakátiyo ranjayati* :—'with eighty-three hundred thousand *panas* he gains the affection of his people' (प्रकृतीः रंजयति.) Then follows,—*datiya cha váse, áchitayitá sotekári pachhima disám, haya gaja nara radha bahula darín pathápayati* : 'and in a second house (which) the architect has prepared (आचितयिताश्चकारी) on the western side, (for) horses, elephants, men, carriages, a number of chambers he caused to be established' (or he transferred them thither) प्रस्थापयति.—*bahula darín* is altered to *thahula dandi* in the corrected copy :—the sense is therefore doubtful.

Kansabanágatáya-dasanáya vátánam saka-nagara-vásino punavase gandhava-veda-budho dampana-tabhata-váditá sandasanáhi usava samajakárápanáhi cha kidapayati nágari.

'For those coming from *Kansa forest* to see ; the balcony (*vátáyanam*, or *vá tánam* and of them) .. of the inhabitants of *Sákanagara* ; he, inclining to virtue, पुण्यवशः skilled in the science of music, causing to be sounded the *dampana* and the *tabhata* (drums ?) with beautiful and merry dancing girls (*nágarí*) causes diversions,' (सद्गीतनीभि उत्सव समाज कारिनीभिश्च क्रीडापयति नागरीः)

Tathá vivuthevase vijádharádhivase a(ra)hata pubakalinga puvarájaniva sati.....

'In like manner turning his mind to law (व्यवस्थावशः) in an establishment of learned men, he (called together ?) the Buddhist priests of eastern *Kalinga* who were settled there under the ancient kings ....'

The sense is here interrupted by abrasion of the stone but the words *vata dhama* (व्रतधर्म acts of devotion) bear out the conclusion that at this age the young prince began to study religion and the laws : the rest of the line is unintelligible.

—(a) bhiyárehi taratana sápatena savarathika bhojakepà devam dápayati.

This passage has much perplexed the pandit—the word *ratna*, jewel, *savarathika*, all equipages,—and *devam dápayati*, he gives to god, the concluding verb, are plain, but the meaning is still obscure.

Pachachadánivase Nandarája tivasata ughaṭitam tannisaraliya vaja panadi nagara pasesa ..... "afterwards (पश्चाच्च दानिवशः) inclining to charity—the hundred houses (?) of NANDA rája (निवास शतं उद्घाटितं) destroyed, and himself expelled (नंनिःसार्य्य?), all that was in the city of *Vajapanàdi* (?)".... here we may fill up——'he converted the plunder to the charitable purposes alluded to;' and this sense is borne out by the beginning of the following or seventh line.

Anugaha anekani sata sahasani visajati;—'he munificently distributes in charity many hundred thousands *(panas)—pora janapadam satamanchatisam pasásato vajaragharavedham satam gharini savata kaha dapanna narapa.....*

Here the sense is too much interrupted to be well made out, and the want of the concluding verb leaves us to guess the object of the repetition of *satam*, a hundred, with *paurajanapadam*, the town territory and *ghara* "house." At the conclusion of this line we find a few known words: .... *thamevase manam.... ta.... ge ... giri* "hill."—

The eighth line is again but partially intelligible:—*ghátápayitá rájá gabham upapiḍapayati: dhatinam cha kammupádana panádena pambátasena váhayati: pammuchitamadhuram apanata .. .. mora dadáti.*

"(To) the prince who caused (its) destruction, he ordains the pain of the cavern (imprisons in one of the caves?)—and causes the murderer to labour *(dhátinam* for *ghátinam)* by a generous requital. *(Pambátasena* the pandit would read *parbatásanam* 'seated on the hill') and lavishes bland speeches and obeisance...."

The ninth line opens with a catalogue of further gifts:—*kapam ukha haya gaja (lulapa?) sahàya sesa cha gharavásáya, anatika-gana nirásasahanancha karáyitun, ba imanánam jatapa* (játiya?) *paradadáti:*

"Apes, (कपि) bulls, (उक्ष) horses, elephants, buffaloes (?) and all requisites for the furniture of the house;—to induce the practice of rejecting (निरास) improper persons, he farther bestowed (or appointed) attendants of the *baiman* caste (brahman?) ब्राह्मणानां जातीय परिदादति—the rest of the line is irrecoverable. Henceforward the commencement also is lost, so that it is only in our power to string together such detached sentences as can be gleaned from what remains. Line 9..... *mánatirája pandarása mahávijaya pásádam kárayati*;—"... rája causes to be made the *palace* (or fort) of fifteen victories."

Line 10.... *puva rája nivesátam pithu-dága-dambha-nagare nakásayatta janapade, bhávaná chá teresa vase satake:*—'finding no glory in the country which had been the seat of the ancient princes,—a city abounding in envy and hypocrisy,—and reflecting in the year thirteen hundred'—a break follows and leaves us in the dark as to what era (if any) is here alluded to. The Sanskrit of this passage would be:

अपूर्व राज निवेसनं (?) प्रथुरागद्धनगरे नकाशयिला जनपद, भावनस्वचयो दश्वर्ष शतके..... after this occurs the expression *amaradehasa páta* "falling of heavenly form"—used to denote the death of a person,—then *barasa* 'twelve' and at the end of the line, *siri pithirájáno,* which in Sanskrit will be श्रीपृथ्वीराजान : (राजा)

..tajáloralakhila báranasi hirananivenayati—apparently 'he distributes much gold at *Benares* (*S. váranasam hiranyáni visirjati*)—all that follows is too uncertain until we approach the verb,—*anekáni dato (deva ?) mani ratanáni aharápayati,* 'he gives as charity innumerable and most precious jewels.'

14th line.... *si novasikariti terasamava (sata ?) vasesu panchata (pabata ?) vijaya chana kumarí pasange, arahate panavasata pi kamani sídináya yápuravake* .... 'in the year thirteen hundred married (S. प्रसंगः) with the daughter of the so-called conqueror of the mountains (a hill rája)'—..the rest is obscure but seemingly declaratory of some presents to priests.—

15. This line presents but a few words of intelligible import—*vihitánancha sata disánam ..... sidiya samípe subhare—aneke ya janá,* and the final word *dhanáni.*

16. *Patálake chatara chetegharíya gabha thambhe pati (thá) payati,*—'he causes to be constructed subterranean chambers, caves containing a *chetiya temple* and pillars'..... *agisati katariyam napádachhati—agama rájá savatha rájá saurase(na)rája..ma rájá pasata saghate....ranáni.*

The meaning of this judging from the last word and the constant repetition of '*rája,*' is that he had many encounters with various princes, including perchance the rája of *Saurasena,* or of *Saurashtra ?*

The last line begins well: (omitting *u vi se*)—*kusalo sava pásanda pújan (iya)* (17 letters) *kárakára ....patihata lakiváhani bálevákadhagata chana pavata chako rájásanka lavinaravato mahávijaye rájá kháravela sanda,*—" for whom the happy heretics continually pray ..... slayer, having a lakh of equipages..... the fearless sovereign of many hills, by the sun (cherished ? or some such epithet) the great conqueror rája KHA'RAVELA SANDA (or the king of the ocean-shore—reading *kháravelasya,* and supposing the two final strokes not to be letters)."

All who take an interest in Indian antiquities will at once see the value of the above record—perhaps the most curious that has yet been disclosed to us,—and will lament the irretrievable obscurity in which the dilapidation of ages has involved the greater part of its contents. Much may be objected to in the hasty analysis which, in the midst of the interruptions at this busy season, I have hurried prematurely into

publication: but there can be little doubt of the main facts,—that the caves were executed by a Buddhist rája of *Kalinga* (named AIRA?) who at the age of 24, after having pursued his studies regularly for nine years, wrested the government from some usurper—distributed largesses bountifully—repaired the buildings—dug tanks, &c. The ambiguity in what follows is partly due to the imperfection of the Páli dialect which expresses the Sanskrit वश : *vasah*, 'led on by, enthralled,'—by the same letters, as the word वर्षे *varshè*, 'in the year.'—I have interpreted it in the latter sense wherever I found a numerical accompaniment,—and in the former where by it only I could make sense.—Each change of inclination is consistently followed by a description of corresponding conduct, and we have throughout a most natural picture of a prince's life, wavering between pleasure and learning,—between the brahmanical and Buddhist faith, then doubtless the subject of constant contention. The history embraces his alliance with the daughter of a hill chieftain and perchance even his death, though this is very unlikely. I have no time however to review the contents of the inscription as it deserves, and must content myself with one or two remarks on the identification of the prince.

Tradition, Mr. STIRLING tells us, ascribes the construction of the *nour* or palace on *Udayagiri* to rája LALAT INDRA KESARI, a favourer of the Bauddha religion, who reigned about the year A. D. 617.

The name of AIRA has doubtless much affinity to INDRA, and the epithet *mahámeghaváhana* "borne on the clouds," metaphorically applied, might support the hypothesis of their being synonymous; but we cannot imagine that the writing is of a period so modern as his reign.

There is, higher up in the same list of *Orissa* kings, the name of INDRA DEVA about 340 A. D.,—but even he is not sufficiently old: and it is evident we have no real account as yet of the early rájas of *Kalinga*.—The very name is lost sight of in the *vansavalis* and *cheritras* of *Or-desa* or *Utkala-desa* consulted by STIRLING,—nor am I aware of any direct treatise on the subject. The country is only known by Sanskrit authors from its frequent mention along with *Anga* and *Vanga**. But we have far more particular and frequent allusions to it as an extensive and powerful kingdom in the Buddhist annals of *Ceylon*.

Kalinga, (or as it is called in M. CSOMA's analysis of the Tibetan authorities†, 'the country of the king of *Kalinga*,'—in curious accor-

* In a broken inscription-slab just brought to my notice in the museum, by Mr. KITTOE, the *Kesari* rajas are called *Kalingádhipati*.

† Asiatic Researches, XX. page 317, Notice of the death of BUDDHA.

dance with the *Kalinga rája vansa pura* of our inscription,) was one of the twelve places among which the relics of *Buddha* were distributed at his death. The left canine tooth fell to its share, and Mr. Turnour informs us from his *Páli* records that the capital of the province was named *Dantapura*; evidently in consequence of this circumstance. The frequent contentions that arose in after ages, for the possession of this precious deposit, may have been the cause of the decline and ruin of this ancient kingdom, which although still known to the natives as the appellation of the coast or maritime tract from *Cuttack* to the *Chilka* lake, has not now sufficient importance even to be named in 'Hamilton's Hindostán :'—and is only preserved in the name of a small village, *Calingapatam*, probably once the capital; for the inscription teaches us that it was occasionally changed at the pleasure of the sovereign.

On the other hand I need but refer to page 860 of the present volume to prove what an important position the *Kalinga* monarchs at one time enjoyed in India. Their capital was probably at this early period the principal emporium of commerce. The inscription tells us that the young prince was instructed in *náva-vapára* 'ship-commerce.' During the life of Shakya, also, we learn from M. Csoma, the king of *Kalinga* sent the king of *Kosala* a piece of fine linen cloth as a present*. It is from these invaluable disclosures of the Buddhist records alone that we can gather any light upon the subject of the true *Kalinga* dynasty, to whom the present inscription undoubtedly relates. "The ruling sovereign, says Mr. Turnour, who received the relic at Buddha's death was Brahmadatto†. He was succeeded by his son Kási, who was succeeded by his son Sunando. These rájas are stated to have been profound Buddhists. From the undiscriminating tone in which the ensuing monarchs are stated to have 'continued to make offerings to the tooth relic of the divine sage,' it is reasonable to infer that subsequently to Sunando's reign, Buddhism ceased to be the faith of the rulers of *Kalinga*. At all events Guhasiwo, who was a contemporary of the Ceylonese monarch Mahase'no must have reigned towards the close of the third century of our era, is admitted to have been of the brahminical faith."

* Csoma's analysis of the *Dulva*, Asiatic Researches, XX. 85. "It comes afterwards into the hands of a lewd priestess, who puts it on and appears in public, but from its thin texture appears to be naked." This cloth must therefore have been as fine as the *Dacca* muslins of later days.

† I find the name of *Brahmadatta*, written *Bhamadatasa* on one of the Buddhist coins of the *Ramadatta* series.

Now this picture accords surprisingly with the facts gleaned from the mutilated inscription. In SUNANDO, we may be perhaps allowed to recognize the NANDA rája whose name twice occurs rather than one of the nine NANDAS of *Magadha;* the hero of the record may have succeeded him, and he, as we have seen, wavered between the rival religions. The name of this young prince from the most obvious interpretation of the opening line would seem to be AIRA, the excavator of the caves and repairer of the palace and religious edifices.

But there is another explanation of the first line, which seems more consistent with the epithet *Mahámeghaváhana* 'the great rider upon the clouds,'—a term hardly applicable to a terrestrial monarch. It will be remarked that the termination *lunam,* 'excavated,' is indefinite as to time; and far different from the conclusion of every subsequent sentence in a causal verb of the present tense, as, *kárayati,* 'he causes to be done.' This first line then may be independent of the rest, and may be similar to the announcements upon the other caves, also terminating in *lunam;* or in other words, it may declare the name of the cave as, 'the cave of *Aira.*' Now STIRLING tells us that INDRA'S wife was the last to inhabit these caves, but that "they date from an age much anterior—the time of BUDDHA;"—that is, not of SÁKYA, but of BUDDHA the progenitor of the lunar race according to Pauranic mythology;—in common parlance from 'time out of mind.'

Again WILSON, in his analysis of the MACKENZIE manuscripts (vol. 1, p. cv.) remarking that they present no satisfactory materials for tracing the ancient history of the countries north of the *Krishna,* cites among the few traditions recorded, that "the excavations at *Ellora* are ascribed to ILA the son of BUDDHA the son of the moon." The rájas who ruled subsequently at *Ellora* are said to be YUVANASWA, DANDAKA, INDRADYUMNA, DARUDHYA, and RAMA rája.'—(Of these INDRADYUMNA, it may be remaked, en passant, is the traditionary founder of the temple of *Jagannáth.*)

The ILA above mentioned is properly speaking not the son but the wife of BUDDHA,—in other words ILA' or IRA', the goddess of the earth, or water. From whom was born AILAS or PURU'RAVAS, progenitor of the two principal branches of the CHANDRAVANSA who reigned at *Kási* and *Pratishthána.*

The essays of WILFORD contain frequent mention of ILA and ILA', (for this personage is both masculine and feminine,) whom he identifies with JAPHET as *Ilapati* or *Jyapati;* and again with *Ilys* of the Orphean theogony, *Gilsháh* of the Persians, and *Ilus* of Homer*. He has, however, omitted what appears to me a much more rational analogy both

* Asiatic Researches, VIII. 255.

philological and mythological; namely, that between the Hindu goddess IRA', and the JUNO of the Greeks "Ηρα" or Hera*. The name is not only identical, but to both, though not precisely in the same manner is applied, in western and eastern fable, the decision of the question which could not otherwise be solved of the comparative pleasure to male and female in the conjugal union. Again, the son of ZEUS and HERA is ARES, "Αρης," or MARS; a name for which, KEIGHTLEY asserts, no satisfactory derivation has yet been given. Now this word is almost identical with ऐरस *Airas* or *Ailas*† the direct patronymic of ईरा IRA' or ILA', and the name constantly employed in the *Puránas* to designate PURURAVAS, the celebrated lover of the heavenly nymph URVASÍ, whose tale is told in the *Vishnu* and *Padma Puránas*, and more pathetically in KALIDA'S's play of *Vikram-urvasi*, lately translated by Professor WILSON.

PURU'RAVAS or AILAS was the first monarch of the seven-fold earth‡, and hence might be as well entitled to be called king of *Kalinga* as of every other country. We may therefore understand in the opening passage of the inscription,—'these mountain caverns were excavated by AILAS, the great king, the cloud-supported, the *lord of Kalinga*,'—no more than an allusion to the same tradition of the origin of these caves as that which prevails at *Ellore*; coupled with the other local tradition, related by STIRLING, that the whole of the rocky hills of *Udaya* and *Khandgiri*, were conveyed thither from the peaks of the *Himálaya*, the headquarters of PURU'RAVAS' earthly dominion, so well pictured in the poetic fiction of his cloud-borne chariot.

Stripped of its mythological and poetical dress, we may understand by the passage that the caves were natural chasms worn in the mountains by the action of the winds and the waves; for *irá* signifies 'water, the ocean;' as *airávata*, or *airávana*, 'the ocean-born,' is the elephant of INDRA the god of the heavens, the atmosphere, whose name is still preserved in the sculptures at *Ellora*§.

* KEIGHTLEY derives Ηρα, from *hera* the Latin for 'mistress!' others deduce it from *aer* the air and *erao* to love, both equally unsatisfactory.

† The daughters of JUNO are by HOMER entitled the *Lileithyiæ*, in which the *r* is changed to *l*?

‡ "The holy BUDDHA begot by ILA'a son (PURU'RAVAS) who performed by his own might a hundred *aswamedhas*. He worshipped *Vishnu* on the peaks of *Himálaya* and thence became the monarch of the seven-fold earth." Extract of the *Matsya purána*, WILSON'S *Hindu drama*, Vol. I. page 191,—English Edition.

§ In looking at MALET'S account in the sixth volume of the Researches, I perceive one of the *Ellora* caves is called *Doomar Leyna*. In this name we may satisfactorilyr ecognize the *lena* or *lona* of the *Khandgiri* inscriptions—the word should, I presume, be read *Dharma lunam* धर्मलूनं the excavation of *Dharma*, having a gigantic

Should this interpretation of the first line be admitted, though we shall be disappointed in finding the true mundane origin of these singular monuments, we shall nevertheless have abundant reason to admire the antiquity of the Indian mythos, when we thus find in a monument undoubtedly prior by some centuries to the Christian era, the selfsame story which is now repeated by the faqírs who shew visitors over the similar stupendous relics of ancient grandeur on the west of India. In this point of view alone the restoration of the *Khandgiri* inscription, thanks to Mr. KITTOE, must be set down as a grand point gained to confute the arguments of the modernists, as they may be called, who would bring every thing Indian within the space of ten or twelve centuries.—Thus we find Sir C. MALET wavering between the following accounts of *Ellora* derived from opposite sources :—

"The Mahomedan says, 'the town of *Ellora* was built by rája EEL, who also excavated the temples, and being pleased with them, formed the fortress of *Deogiri (Daulatábád)* which is a curious compound of excavation, scarping and building, by which the mountain was converted into a fort resembling as some say the insulated temple in the area of the Indur Subha. EEL rája was contemporary with SHA'H MOMIN ARIF who lived 900 years ago.'

"The Brahman on the other hand says—'that the excavations of *Ellora* are 7894 years old, formed by EELOO rája, the son of PESHPONT of *Ellichpore* when 3000 years of the DWA'PAR YUG were accomplished. EELOO rája's body was afflicted with maggots, and in quest of cure he came to the purifying water named SEWA LYE or as it is commonly called SEWALLA, that had been curtailed by VISHNU to the size of a cow's hoof. He built a *Kund* for it and bathing therein was purified*.'"

In these conflicting stories we can trace the selfsame tradition of ILA extracted by WILSON from the MACKENZIE records.

It would be well worth while to re-examine the particular manuscript (the number of which is not, however, mentioned), to ascertain what further is said of him, and whether it be possible to consider him in the light of a real monarch of *Deogiri*, whose son could by possibility have imitated his father's propensity for forming impregnable mountain fortresses in the rocks of *Kalinga*: or whether the name is not rather *Aila* than *Ila*, which will make the same personage at both places, mythological or real, the originator of the excavations. Should an actual monarch, named after this demigod, have ruled in central India in the fourth century before Christ, his synonyme *Pururavas* would bring him satisfactorily into the conditions required for the Grecian *Porus*!

image of that god in it. Other caves are called *wassa* 'chamber;' as *Jun wassa*, *Cumara warra* (wassa'), &c. this is the vasá of the inscription.

* Asiatic Researches, VI. 385.

From the second line onwards the inscription of course speaks real events, and is well deserving of a minute and critical examination; but neither time nor space will permit me to say more at present on this prolific subject, and I ought indeed in concluding this hurried and imperfect notice, to apologize for offering it to the Society in so immature a shape.

For the sake of reference I here insert the whole inscription in a connected shape.

1. *Namo arahaṇtantánaṃ na(mo)sava sidhánaṃ Airena mahárájena mahámeghavá-hanena chetakájata (natan) chhadhanena pasatha sak(e)lakhanena chaturaṇtula thánaga (nena) kha te va kalangádhapatirásisikhi avalonam.*

2. *Paṇdarasa vasáni siri kaḍára sariravatá kiditá kumára kiḍiká tato lekharúpágana nára vapá(ra)vidhi visáradena, sava vijávadátena navavasáni hoi arajapanasivasa puna chavaisati vase dána vadhamena sesa yochenábhivijayo tatiye*

3. *Kalinga rája vansa pari sayuge mahárája bhisechanaṇ papunáti, abhisitamate va pu dhamma vase vátavihatato purapákára nivesanaṃ patisaṇkhárayati, kalinganagari khidhira sitala tadága páḍiyocha bathapayani saveyánapati saṇ thapayati a*

4. *Kárayati, panatisi(ra)si satasahasehi pakataya ranjayati, datiye cha váse achita yitá sotekári payimadisaṃ hayegajanararadha bahula daṃ dipathá payati; kaṃsa banú gataya ḍasanáya vátánam sika nagarai ásino punavase*

5. *Gaṇdhai aredabudho dapana tabhatá ádita sandusanáháṇ usava semajákáiá panápicha kiḍapayati nágari; tatho vivuthe vase vijádhari ádhiásа ahata puva kálaga puva rájana e satu.....vata dhamati'a sa á.....rite ranikhitechhata.*

6. *Bhigárehita ratana sápateya sava rathika bhojakepádetam dapáyanti, pachala chaddánivase nandarája tiasata ughátitaṃ tanasaraliyaraja panáḍinagarapasesa risi ..... sabhásari cha .. pásacha sadasa tepava karavana.*

7. *Anugaha anekáni satasahasáni visajati porájánapadaṃ satamaṇchatisam pasásato vajaragharavedhaṃ satamgharinisa votaka hadapana narapa .... thamecha vase manam na . n ..... tan . gè .. vegiri*

8. *Ghátá payitá rajá gambha upapiḍupayati dhatinaṃ chakaṃ mupadana panádená pabatasena váhanáti pamuchitumadhuram aparato nivera .. (20) moraḍadati (5)—(15).*

9. *Kapa ukha haya gaja raluve saháya sesacha gharú vasapa manati katano virasa hannaṇchu kárayituṇ ba imana naṇjatapa paraduddti; ran .... (9) há (31).*

10. *Ra . i nanati rajá rami rasa mahávijaya pásada derayati thatasaya sate surelahi dasáme chasa .. dava .... rara gavasapa (10) pabayava (17) tiraparunatana ramare tánána upahi.*

11.....*pacha para rájanivesátam pithuḍágada bhanagalena kásayata janaṃ Padebhávannacha teresavasesataka .. da(ta itemaradehasapáta barasama va (13) ..... pavathaka .... he hi ri tisáyato utiri pithirajáno.*

12. *Machalava cha vipula leyam janetoh i thasaṇ gaṇga sapánayati .. dha cha rajána i bahaga sásitu pádeva dapayata naṇda rájá ni ta va a gajinasana (16) makhana paṇḍa pakhasi é e múga dha cha ja tu na gharí.*

13. .. *tajalarala khila baranisi hiranniraneyati sata vasá sanapa vihare naṇ a sumasari yachahathi .. nauna paripara ariaranasa yahara paḍarajano ,paḍarájasa dari aneka nadato manorata rana ahará payati idhasatasa.*

14. *Si nerasi kaḍati terasa mara vase supariata vijaya chako kumari pasante arahate panno visata pikam rani sidhápayaya puhavukehira atani chenam devani sasasutani ujana utas-yáraia ladiranají deta .. dukarari khiti.....*

15. *Sakatasame rasarihitinun chasuta disánunjnata a yesa i .. sampapanu arahasani sidhyasamipe subhare vastra samathaghisipa anakeyá janahi pihiya ..... rasilahu sapopatha dhura si dhasayani .. náni.*

Inscription on the Cuttack dialect.
(see Rhinelang's Memoir)

Printed at the Oriental Lith. Press—Calcutta

To illustrate the

16. *Patalake chatapa cheveru riya gabhathabhe pati pa . yati panatanusata .... raja .. riya la machhinen cha choyatha agisati katuriyaṃ napádachhati agama rájá sava tha rájá saresera .... ma rájá pasato saṭi te apa dha ji da .... laṇoni.*

17. *Vi ronóvise kusalo sava pásaṇḍa pújano* (8) *chha* (3) *kárakára* (3).. *pati patalakiváhani bálerákadharagata chano ghavata chako rájásanka laviná ravato mahavijaya rájá kháravela saṇḍara.*

VIII.—*Memorandum regarding specimens from Seoní Chupara*, Pl. LVI.

By D. W. McLeod, *Esq.*

The accompanying minerals were collected by me during a tour through the district, wherever I met with projecting rocks or veins; but not being sufficient geologist accurately to identify them all, I have contented myself with attaching numbers to each, corresponding with those on the accompanying sketch map, so that the site of each may be identified.

The greater portion of the district forms a part of the *Sutpara* range up to its junction with the *Vindhya* at the source of the *Nerbudda*, and its character in this part would appear to be a basis of primitive rock (projecting to the southward where it forms cliffs, in many places of several hundred feet in height), overlaid by basalt, and that again very frequently by laterite. The magnesian limestone appears in some parts at the surface in veins of considerable magnitude; and other rocks in various parts may doubtless be found intersecting the basalt; but the three descriptions of rock above noted undoubtedly form the main features of the entire tract.

The southern purgunnahs of the district lying below the cliffs alluded to above, are formed I believe, entirely of the detritus from the primitive ranges, being a silicious clay increasing in richness in proportion to its remoteness from the cliffs and vicinity to the *Máyá Gangá* river; below the upper soils, clays and limes of different characters occur, and veins of laterite and other rocks occasionally make their appearance at the surface, and in one part an apparently very rich vein of black iron ore (mistaken by the natives for antimony, and called by them *Súrma*), of which a specimen will be found amongst the accompanying.

The principal character of the district above the Ghâts is that of table land, intersected by numerous ranges of hills, and abrupt ascents and descents. The abundance of moisture in the more eastern portion is perhaps its most remarkable feature, and this characteristic appears to become more fully developed in proportion as the elevation increases until we reach the highest point of all *Amarkantak*, in the vicinity of which the *Laú*, *Mahánadí*, and *Nerbuddá*, flowing north, west, and

south-east all take their rise. While traversing this tract in May of last year, I found wherever there was any declivity so that moisture could lodge, green grass of two or three feet in height; and cattle sent thither from the breeding purgunnahs hundreds of miles distant in the month of March, return in June in the finest condition. The tract in question is at present almost unpeopled; but it appears to possess the finest capabilities were they developed by the application of capital and industry. The silicious clay, and iron clay soils, which constitute the greater part of it are admirably calculated for irrigation, (the former in particular,) yielding both rain and spring crops; and trees thrive in them with a vigour which can scarcely be surpassed. The basaltic soil also yields very fine Rubbee crops for several successive crops: but owing to the avidity with which it absorbs moisture, irrigation has not been applied to it. The appearance of the country is highly interesting; and well worthy, I conceive, of greater attention than capitalists have hitherto paid it.

The purgunnahs below the Ghât, however, are at present by far the most highly cultivated, tanks having been formed in every village for irrigation, and the population being dense and prosperous. This is attributable no doubt originally to the predatory habits of the *Gonds* inhabiting the higher tracts, who in former times effectually prevented the progress of civilization and industry, and latterly other causes may likewise have been in operation, tending to the same result. At present the principal products of those portions inhabited by *Gonds* are tussur, lac, wax, honey, catechu, dammer and other produce of the sâl, teak, and other forests which abound; though in parts here and there the cultivation carried on by them is by no means inconsiderable.

[The minerals are deposited in the museum, numbered to refer to the accompanying plate.—Ed.]

IX.—*Proceedings of the Asiatic Society.*

Anniversary Meeting, Wednesday Evening the 3rd January, 1838.

H. T. Prinsep, Esq. Vice-President, in the chair.

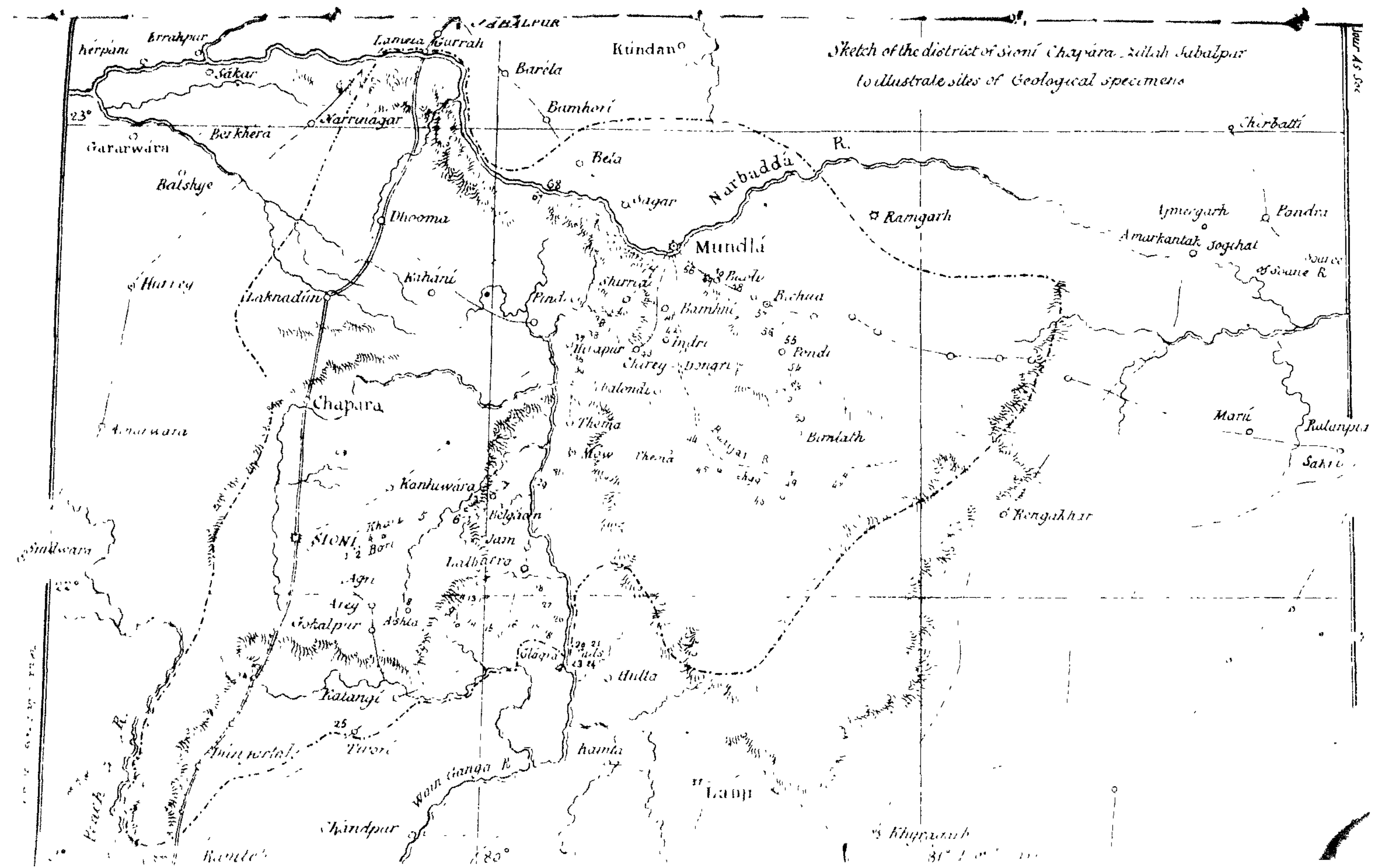
J. H Batten, Esq. C. S. Baboo Conoy Lall Tagore and Charles Elliot Barwell, Esq. were elected members.

Major W. H. Sleeman, was proposed by the Secretary, and seconded by Mr. D. McLeod.

J. W. Grant, Esq. proposed by Dr. McClelland, seconded by the Secretary.

Mr. G. A. Prinsep, proposed by Mr. Cracroft, seconded by Captain Forbes.

Assistant Surgeon J. Arnott, M. D. proposed by J. Hill, Esq. seconded by the Secretary.


Jour As Soc
Sketch of the district of Sioni Chapara, Zillah Jubalpur
to illustrate sites of Geological specimens
Jabalpur
Lamita
Gurrah
Kundan
Barela
Bamhori
Bela
Sagar
Narbadda R.
Mundla
Ramgarh
Amarkantak
Aymergarh
Pondra
Source of Soane R.
Chirbatti
Sakar
Narrinagar
Berkhera
Gararwara
Balshye
Dhooma
Kahani
Laknadun
Hurrey
Chapara
Kanhuwara
Sioni
Agri
Arey
Gokalpur
Ashta
Katangi
Tironi
Lalbarra
Jam
Belgaon
Thema
Mow
Bamhni
Indri
Charey Dongri
Pondi
Bichua
Birnlath
Hulta
Glagra
Lanji
Wain Ganga R.
Chindpur
Rengakhar
Mani
Ratanpur
Sahri
Khyragarh
Sulkwara
Peach R.
23°
22°
80°
81°

Dr. BONSALL, an American physician resident at Manilla, proposed by the Secretary, seconded by Captain FORBES.

SYED KERAMAT ALI, proposed as an associate member by the Secretary, seconded by the chairman.

The Chevalier AMEDEE JAUBERT, President of the Asiatic Society of Paris, proposed as an honorary member by the Secretary:—referred to the Committee of Papers.

The meeting proceeded to select office-bearers for the ensuing year,—first resolving as an arrangement of convenience that the three members of the Museum Committee should be included in the number (nine) constituting the Committee of Papers. The majority of votes returned as *Vice-Presidents for* 1838,—The Lord BISHOP, Sir J. P. GRANT, H. T. PRINSEP, Esq. and Col. D. MACLEOD, Chief Engineer. *Museum Committee* (re-elected) W. CRACROFT, Esq. Dr. MCCLELLAND and Dr. G. EVANS, to whom were added to complete the *Committee of Papers*, Captain FORBES, Prof. O'SHAUGHNESSY, Dr. WALLICH, D. HARE, Esq. W. ADAM, Esq. and Dr. D. STEWART.

Correspondence.

Letters from Captain HARKNESS, Secretary, Royal Asiatic Society,—from Professor FRANK of *Munich*, MM. BURNOUF and JACQUET, were read acknowledging receipt of presentation volumes.

A letter from Messrs. ALLEN and Co. forwarded bills of lading of the bust of Professor WILSON insured at 200 guineas. The bust having safely arrived was placed for the inspection of the meeting at the end of the hall:—

Resolved, that Colonel MCLEOD, Captain FORBES and Captain SANDERS, be appointed a special committee to select a place for the erection of the bust and to design an appropriate pedestal.

The bust does great credit to its eminent sculptor CHANTREY. It is a remarkably good likeness of the Professor clothed in all the dignity of classic simplicity and grace: somewhat larger than nature, and intended to be placed above the spectator. On the back is inscribed,—"HORACE HAYMAN WILSON, Secretary of the Asiatic Society, 1811-1832."

Read the subjoined reply from Captain CAUTLEY to the following letter addressed to himself and Dr. FALCONER in virtue of the resolution of last meeting.

Extract of Secretary's letter to Dr. Hugh Falconer and Capt. P. T. Cautley.

"It is indeed with no ordinary pride that the Asiatic Society has beheld this first public token of approbation bestowed by one of the leading scientific institutions of England upon two of its members for discoveries—not withheld for prior communication where their merit and value were sure to win honors and fame, but at once made known to their associates and published to the scientific world through their transactions.

The honor to yourselves is the more flattering because it is disinterestedly bestowed, and as honorably won by the real merit of your researches in a field of your own discovery, and in a country hitherto supposed barren of fossil remains.

Those who have followed you in other parts of the same field, and in the no less interesting valley of the *Nerbudda* and in the Gulph of *Cambay*, will share the gratification you must feel at this growing attention of scientific men at home to the geology of India; and the Society as a body feels that it cannot but derive benefit as well as lustre from every tribute of approbation won by the individual exertions of its members, whose activity and cooperation constitute at once its reputation and its existence.

I have been instructed by the President and members to thank the Geological Society for their consideration in allowing them thus to see the medals and to be the channel of conveying them onwards to *Seharanpur*.

[Additional to Dr. FALCONER.]

In doing so I shall not fail to make known the zealous continuation of your joint researches, crowned as they were the last year by the discovery of a gigan-

tic fossil ape, the nearest approach to fossil man that has yet rewarded the labour of geologists. I shall also allude to the Scientific Mission upon which you are at present engaged, and lead them to participate in our expectation of splendid and valuable results to science in all the branches which your extended knowledge embraces."

Reply to the Sec. As. Soc. dated Camp Doab Canal, 21st Nov. 1837.

Sir,

I have the pleasure of acknowledging your letter of the 10th instant, with the Wollaston medal awarded by the London Geological Society to my colleague Hugh Falconer and myself.

Although the honor conferred upon us by the late Council of the Geological Society of London (distinguished as that Council was, and doubly distinguished in the name of its President) has been and is the source of extreme gratification, I would not lose this opportunity of expressing the acknowledgments which I consider due to the Asiatic Society of Calcutta, not only for its having been in my case the animater of my humble career in the paths of science, but also from its having done us the honor of admitting our papers into its Transactions, and thereby of providing the Geological Society with data, by which it has been guided in its present award.

(Signed) P. T. CAUTLEY, Capt. *Bengal Artillery.*

Library.

The following books were presented :—

Voyage dans l'Inde par Victor Jacquemont, Parts 1 to 13—*presented by the Government of France*—(forwarded by Messrs. Jouy et fils of Paris)

Translations of the Linnean Society, Vol. XVII. Part IV. and a list of its members—*by the Society.*

The fourth and fifth Reports of the British Association for the advancement of Science—*by the Association.*

Modern India, by Dr. H. H. Spry—*by the Author.*

Journal of the Royal Asiatic Society, No. 7—*by the Society.*

Earl Stanhope's address to the Medico-Botanical Society—*by the Society.*

Proceedings of the Royal Society, Nos. 18 to 29—*by the Society.*

Proceedings of the Royal Irish Academy for the year 1836-7—*by the Academy.*

Proceedings of the Committee of Agriculture and Commerce, &c. of the Royal Asiatic Society—*by the Society.*

A letter to the Right Honorable Sir Henry Hardinge, K. C. B. M. P. on the effects of solitary confinement on the health of soldiers in warm climates, by John Grant Malcolmson, F. R. S. and M. G. S. Surgeon E. I. C. Service, late Secretary Madras Medical Board—*by the Author.*

Ancient and Modern Alphabets of the Popular Hindu Languages of the Southern peninsula of India, by Captain H. Harkness, M. R. A. S.—*by the Author.*

Von Hammer's history of the Ottoman empire, Vol. 18—*by the Author.*

Jahrbucher der Literatur, Vols. 73, 74, 75, and 77, edited by the Baron Hammer Purgstall—*by the Author.*

Four Gospels and Acts of the Apostles, Anglo-Hindustáni—romanized, *by* Mr. C. E. Trevelyan.

Meteorological Register for November 1837—*by the Surveyor General.*

From the Booksellers:

Lardner's Cabinet Cyclopedia—Literary and Scientific men, vol. 2.

The Secretary laid before the Meeting, a copy of the *Khazánat ul Ilm* at length completed, also the first proof of the *Shurayu ul Islam* recently undertaken in conjunction with Newab Taha'war Jung. Also the catalogue of Sanskrit, Prákrit, and Hindí works, in the Society's Library; inclusive of those received from the College of Fort William.

Resolved, that copies of this and of the Persian catalogue, should be distributed to the learned Societies and to such oriental scholars as are honorary members, in order that the contents of the Library may be generally known; and that copies may be made under the superintendence of the Society's pandit or maulavi of any manuscripts for parties who may be desirous of obtaining them, at the customary rates per 1,000 slocas for Sanskrit, and per *júz* for Persian, subject to audit by the Committee of Papers.

Resolved, on the motion of the Secretary, that two copies of the oriental works lately completed by the Asiatic Society be presented to his Royal Highness, Prince HENRY of Orange, for the Universities of Utrecht and Leyden respectively.

The Secretary then read the Annual Report of the Society's progress for the year 1837.

"The accession of Members to the Society during the year 1837, had been larger than in any preceding year since the foundation of the institution, viz.

Ordinary Members (including Mr. TURNOUR's name transferred), .. 40

Honorary Members,.. ..... 7 viz.

The Right Honorable C. W. W. WYNN, Sir ALEX. JOHNSTON, Sir G. STAUNTON, the Bishop of Isauropolis, M. P. A. LAIR, President Caen Society, the Baron SCHILLING of Cronstadt and Nawab ABDUL JABAR KHAN, Bahadur.

The loss of Members by death and departure to Europe had been as follows:

By departure to Europe, Col. COLVIN, Dr. MILL, Col. HEZETA, Dr. CANTOR, Dr. SWINEY, Dr. LANGSTAFF, Mr. G. A. BUSHBY, Rev. Mr. BATEMAN; and on the eve of departure Sir C. T. METCALFE, Bart., the Honorable Mr. MACAULAY, Sir C. D'OYLY, Bart., C. E. TREVELYAN, Esq. the Honorable W. L. MELVILLE, and H. WALTERS, Esq.

By decease in India, the Honorable Sir BENJAMIN MALKIN, V. P. the Rev. Dr. MARSHMAN, and among members retired to Europe the illustrious HENRY COLEBROOKE, Esq., Mons. KLAPROTH, Sir W. WILKINS and Dr. ROBT. TYTLER. To the memory of the first of these distinguished men a tribute had been placed on the Society's proceedings, and the pages of the Asiatic Journals of London had embodied biographical notices in detail of Drs. WILKINS and TYTLER, justly appreciating the services which in their separate lines of study they had rendered to Sanskrit and Arabic literature.

Sir BENJAMIN MALKIN, had been but a short time a resident member, but he had entered most warmly and efficiently into the interests of the Society, choosing for himself as President of the Statistical Committee a most important and hitherto unexplored field of investigation.

Dr. MARSHMAN was the companion and fellow-labourer of the late Dr. CAREY. Like the latter he felt the immense advantage to be obtained in his peculiar mission, by mastering the learned languages of those whose minds and hearts he would address. While his colleague therefore devoted his attention to Sanskrit and Bengalee, he applied himself with equal diligence to the study of the Chinese language, so that he was soon enabled to complete and to publish at Serampore, with type of his own fabrication, a translation of the whole Bible in the Chinese language. The following account of his habits of industry is extracted from a notice in the Friend of India for 14th Dec. 1837.

"His constitution appeared to be constructed of iron. He exposed himself to all the severities of an Indian climate, with perfect impunity. He enjoyed, till within the last year of his life, such uninterrupted health, as falls to the lot of few in India. During thirty-seven years he had not taken medicine to the value of ten rupees. The strength of his body seemed to be admirably adapted, with the structure of his mind, to fit him for the long career of usefulness he was permitted to run. He was peculiarly remarkable for ceaseless industry. He usually rose at four, and despatched half the business of the day before breakfast. When extraordinary exertions appeared necessary, he seemed to have a perfect command over sleep, and has been known for days together, to take less than half his usual quantity of rest. His memory was great beyond that of most men. He recalled facts, with all their minute associations, with the utmost facility. This faculty he enjoyed to the last day of his existence. During the last month of his life, when unable even to turn on his couch without assistance, he dictated to his daughter Mrs. VOIGT, his recollections of the early establishment of the Mission at Serampore, with a clearness and minuteness perfectly astonishing. The vast stores of knowledge which he had laid up in early life, and to which he was making constant addition, rendered his personal intercourse in society a great enjoyment."

The following was the abstract of receipts and expenditure during the past year on the general account, taken from the Treasurer's books.

Payments.	Rs.	As.	P.	Receipts.	Rs.	As.	P.
To Secretary's office establishment,	790	5	9	By balance 31st Dec. 1836,	220	3	8
To House establishment,	1714	6	0	By collections of quarterly contributions and admission fees,	6994	8	3
To Oriental Library ditto,	1014	0	0				
To Curator's salary up to the 18th August,	1290	0	0	By museum grant from Government from Aug. to Nov. at 200,	800	0	0
To ditto contingent,	644	10	8				
To Printing 1st pt. 19th vol.	1506	10	8	By establishment for care of Oriental manuscripts,	936	0	0
To Stitching ditto,	75	0	0				
To Printing authors' extra copies,	139	14	0	By Interest on Govt. securities,	742	3	4
To Lithographic plates by Tassin,	348	8	0	By Dividend from Mackintosh and Co.	382	13	9
To Kásináth for engravings,	32	0	0	By Sale of Govt. 4 per cent. paper,	2109	6	11
To Members' copies of Journal, 1100, with extras	1293	0	0	By Sale of part 1, vol. 19,	8	0	0
To Contingent charges, including matan matting for ground floor,	973	9	1	By received in deposit from the French government towards procuring a copy of the Vedas,	625	0	0
To transfer to Oriental publication account for Paris sales credited in London,	469	8	0				
To Balance in the Bank of Bengal,	2526	11	9				
Rs.	12818	3	11	Rs.	12818	3	11

To the cash balance were to be added one quarterly contribution, and half a year's interest, together about 2000 rupees: but on the other hand there were bills due for printing and for the journal, and credits to be met for the Spiti expedition and for the Statistical Committee to an equal amount.

Adverting to other accounts kept distinct from the general funds, the Report noticed, first, the subscription raised for the improvement of the museum, amounting to rupees 1429, the whole of which sum had been expended in the construction of various cabinets, and glass cases for birds, animals, insects, shells and fossils, with which the lower rooms were now provided, to the full extent of their accommodation.

Second, the subscription for Dr. Mill's portrait, rupees 1886; of which rupees 1838 4 9 = £180 had been remitted to the London Agents to be held at Dr. Mill's disposal for that object.

In the department of *Oriental Publications* the Secretary's books presented the following statement:

Payments.	Rs.	As.	P.	Receipts.	Rs.	As.	P.
To various bills of the Baptist Mission Press,	2204	9	11	By cash balance of last year,	2174	8	7
To pandit's wages for correction,	24	0	0	By collected from subsrs.	982	10	4
To freight and packing,	53	13	0	By general sales,	546	10	8
To refund to the Editor, of the Inaya,	20	0	0	By works sold to the Education Committee,	334	0	0
To binding, stationery, &c.	37	4	6	By sales at Benares,	93	1	3
To writers and collectors,	120	0	0	By sales at Paris, through the French Asiatic Society, francs 1173, 80 at 2-5 per rupee,	469	8	0
To balance in hand,	2140	11	5				
	4600	6	10		4600	6	10
To bills presented not yet paid:				By balance, 1st Jan. 1838,	2142	13	5
Mahábharat, 3rd vol.	3693	13	0	By outstanding subscriptions, say,	1200	0	0
Khazanat ul ilm,	809	0	0				

All the works which the Society had undertaken to finish were now completed with the exception of the *Mahábharata* itself advanced to the 300th page of the fourth or last volume. Of the sale of this work it was somewhat premature to form any estimate before the whole series could be offered to purchasers; but judging from the other finished Sanskrit works, the native demand would be very limited; owing to the great poverty of the learned classes, to the absence of a *tika* or commentary which most readers required, and to the adoption of the Devanágarí character; the proportion of Bengáli readers being far above that of up-country pandits. By the time the edition would be completed there would probably be a balance against the undertaking of near 6000 rupees.

As one mode of diminishing this large debt, the Committee of Papers had recommended the acceptance of an offer of 1000 rupees for the incomplete copies of the *Fatáwa Alemgiri*, of which a maulavi was willing to undertake a reprint, and it was thought still higher terms might be obtained, so numerous were the demands for law books among the educated Muhamedans. Confident hopes were long entertained of a favourable answer to the Society's Memorial to the Honorable Court of Directors in 1835: it was known that the Court had recommended the local Government to subscribe 500 rupees per month expressly to the furtherance of the Society's Oriental publications, but even that degree of patronage had been since understood to be negatived by the Board of Control; leaving the cause in a more hopeless condition than if a decided refusal had at first been given, from the growing liabilities incurred on the expectation of aid.

Meantime the local Government had most liberally seconded the Society's appeal for support to its museum, and had forwarded with its favourable recommendation, a scheme for elevating that museum into a national institution. The greater success was anticipated to this important movement, since Professor WILSON had been placed in charge of the museum and library at home, to which he was well aware how powerful an auxiliary the Indian institution might prove.

At the meeting of October the existing museum was placed under a special Committee, in lieu of appointing a curator. Too short a period had elapsed to render a formal Report necessary from them. Upwards of 200 new specimens of natural history had in that time been added, besides the ordinary setting up of skeletons, &c. Catalogues of several branches of the collections had been prepared by Messrs. PEARSON, CANTOR, and MCCLELLAND.

In the publication of the Researches great delay had taken place from the Orphan Press having been engaged on urgent Government business. The second part of the 20th volume however was in a forward state.

A catalogue of all the Oriental MSS. now in the Library had been printed in the native character for circulation—the Sanskrit portion containing, as an appendix, lists of such books as the Sanskrit Colleges of *Benares* and *Calcutta* possessed exclusively.

In conjunction with the Nawáb TAHA'WAR JANG, the printing of the *Sharaya ul Islám*, a text book of Shia law, had been undertaken.

Out of the society had appeared many interesting acquisitions to the science and literature of the country. A dictionary of the *Manipur* dialect, a grammar of the *Sindhi*, grammars of the *Belochi* and *Baruní*: besides the Cochin-chinese and Burmese dictionaries, the former now nearly through the press: Mr. TURNOUR'S Páli Annals of *Ceylon*: and a full account of the caves of *Adjanta*. Captain BOILEAU'S Survey of *Shekáwatí* had given a valuable accession to geography and statistics of India; and many reports of scientific expeditions to *Assam*—to the interior of *Maulmein*, to the valley of *Sinde*, &c. had been made public by Government. At the present moment two fresh expeditions had been set on foot, one to *Bootan* under Captain PEMBERTON, the other under Captain BURNES to *Cashmir*; and, under the auspices of the Patron of the Society, inquiries had been circulated on several points of scientific and commercial interest —the tides—lichens—coal, &c.

The current publication of the Society's proceedings in the journal rendered it unnecessary to dwell upon the general subjects that had engaged attention within its walls during the past year. It might be sufficient as an evidence that members were not relaxing in their labors in any branch of research, to state, that al-

thou_h the Journal had nearly doubled its volume, it had still been unable to keep pace with the influx of scientific and literary contributions."

Mr. A. Csoma in writing thanked the Society for the honor they had intended him, but declined accepting the librarianship, as interfering with the course of studies he had marked out for the short period of his sojourn in *Calcutta*.

Resolved—nem. con. on the motion of the Secretary, supported by the Lord Bishop, that Mr. Kittoe be placed in temporary charge of the library and museum on the consolidated allowance heretofore granted to the curator and librarian, viz. Rs. 200 per month.

In introducing the above proposition allusion was made to the important services rendered by Mr. Kittoe in bringing to light the numerous inscriptions of *Orissa* or, more properly, ancient *Kalinga*. A more thorough survey of its ruins was one object contemplated in his nomination, as the discoverer might again be deputed thither when business at home did not press, and he might bring away drawings and plans of all the caves and Buddhist sculpture. There were many deserted monuments there well worthy of preservation in the Society's museum.

Antiquities.

A letter from Captain Sanders, Sec. Mil. Bd. acquainted the Society with the resolution of the Right Honorable the Governor General to devote 2,500 rupees to the re-erection of the *Allahabad* pillar on Captain Smith's design No. 3, with the restoration of the lion capital as suggested by Lieutenant Kittoe.

Mr. Liston forwarded from *Gorakhpur*, a sketch and facsimile of a pillar and inscription discovered by him in the eastern division of that district.

The inscription is in the Samudra Gupta alphabet, and apparently in excellent preservation: an impression has been requested before proceeding to decipher it.

Mr. Vigne transmitted from *Iskardo*, Little Tibet, a more accurate copy of the inscription he had noticed a year ago.

This inscription has been read by M. Csoma and will appear in the next journal.

The Rev. J. Wilson, President, Bombay Asiatic Society, at the request of the Secretary sent round by sea the cloth facsimiles (natural size) of the *Girnar* inscriptions of which copies on paper had been previously communicated.

Although not equal in accuracy to printed impressions, it is hoped that these splendid memorials may now be deciphered. Those of the older character relate to Piyadasi, but they are very different in tenor from the pillar inscriptions.

Mr. Kittoe gave a revised copy of the *Khandgiri* inscription of Stirling.

A curious war-hat worn by the *Singphos*, also their musical instruments, mat-shoes, Chinese boots, and fan, were presented for the museum, by Colonel H. Burney.

Literary.

Read a letter from the Rev. Wm. Taylor, of *Madras*, on the subject of the Mackenzie manuscripts, accompanied with an analysis of several of the restored volumes.

These papers are sent under the impression of their being acceptable for publication in the Researches, reserving the original texts and translations of such manuscripts as are considered worthy of further notice for a separate volume.

Referred to the Committee of Papers.

Major Law, Commissioner, Province *Wellesley*, presented an Essay on the birth of Buddha, according to the Siamese authorities.

Mr. C. E. TREVELYAN, presented in the name of Munshí MOHUN LA[illegible] a notice of the *Daudputras;* also, an account of *Kálá Bágh*, and of BAHA' WAL KHA'N.

Mr. WATHEN communicated from Ensign POSTANS, some extracts fro[illegible] the *Tohfatal Khwám*, relative to the history of [illegible]

Physical.

Replies to the circular regarding Indian [illegible] BAIKIE, Dr. GRIFFITH, and Lieut. HARRIN[illegible]

Specimens of the genuine *Jatamási* (s[illegible] presented by Dr. A. CAMPBELL, Acting R[illegible] remarks on the subject of Sir WILLIAM J[illegible]

Fossil shells (on very large ammonite) [illegible] *Charí* hills, *Cutch*, were presented by Ensig[illegible]

Mr. HOMFRAY, presented the carcass of a [illegible]

Mr. EWIN (through the Honorable Col. [illegible] of shark found at the Sandheads.

Dr. R. TYTLER, presented a fragment [illegible] remarks on the nature of the lines of polarizati[illegible]

Col. BURNEY presented part of the lower jaw [illegible] (the only one yet found) from a new fossil site [illegible]

A drawing of this fragment, which exactly accor[illegible] of the Siwáliks having six equal incisors, shall be give[illegible] writes:—

"I have the pleasure to send for your inspection a fossil, appar[illegible] jaw of a hippopotamus, which was given to me by the prince of [illegible] said to have been found, not near the Petroleum [illegible]ls, but [illegible] ward, on a new site on the opposite side of the [illegible] range of hills called by the Burmese *Tang-gyi*, [illegible] on a plain near the city of *Yau kyakhat*, the ' [illegible] the *Jaghire* of the old *Kyi-Wungyih*.

Hearing that there were other fossil remains at this spo[illegible] *whole body* of the animal from which this lower jaw was t[illegible] the permission of the late Government of Ava to send down [illegible] lowers to examine the spot and bring away all the treasures th[illegible] the breaking out of the revolution put a stop to my expedition; [illegible] present king of *Ava* afterwards promised to order some of these fo[illegible] remains to be brought up for me, he has been too much engaged; I fear, to recollect his promise. I believe this is the first portion of a hippopotamus found in *Burmah*. The inhabitants of *Yau* and the *Burmese* in general reversed this lower jaw, and insisted upon it that it was the upper jaw of a *bhitu* or monster."

Mr. KITTOE presented geological specimens from *Cuttack*, supposed indicate coal—among them a black chalk fit for crayon drawings.

Extract of a letter from Mr. TAYLOR, H. C. astronomer *Madras*, was read, explaining that he had been engaged in observations of the magnetic intensity along the coast of the peninsula east and west of *Cape Comorin*.

The instruments are now with Mr. CALDECOTT who will continue the series from *Trevandrum* to *Tellicherry* and *Bombay*. The observations will be published in a pamphlet when completed. Mr. TAYLOR's Madras Observatory papers for 1836-37, vol. IV. are now in the press.

The meeting then proceeded to discuss the tender of Mr. EVANS' collection of Natural History, when it was resolved that before coming to any determination the Committee of Papers be requested to examine and value the collection and report on the expediency of recommending its purchase to Government.

Meteorological Register, kept

Day of the Month.	Observations at 10 A. M.							Calculated Humidity.				Observations at 4 P. M.								Weather.	
	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Depression of wet-bulb.	Direction of wind.	Force of wind.	Nature of the clouds.	Centesimal tension of vapour from wet-bulb.	Ditto by Hygrom.	Ditto by dew-point.	Nature of the clouds.	Old Stand. Barometer at 32°.	New Stand. Barometer reduced.	Thermometer in air.	Direction of wind.	Force of wind.	Nature of the clouds.	Evaporation.	Rain in inches.	Morning.	Afternoon.
1	29,958	29,918	73,8	6,0				70	76	70	29,867	29,809	80,0							cum.	cumuli
2	,906	,866	73,7	7,7				62	59	57	,909	,863	78,6							clear.	clear.
3	30,048	30,008	74,0	5,7				71	78	72	,940	,886	77,4							cirri.	cumul
4	,014	29,987	71,8	8,7				55	63	63	,896	,851	77,0							clear.	clear.
5	,023	,994	72,2	9,7				52	63	66	,927	,872	75,5							do	do
6	,050	30,027	69,9	8,8				55	61	60	,917	,880	74,9							do	do
7	,007	29,982	71,3	8,8				55	63	68	,870	,857	75,0							do	Hazy.
8	,047	,988	70,6	7,4				60	68	60	,903	,869	75,8							cloudy.	clearing
9	,004	,982	71,1	6,4				66	74	65	,911	,863	75,8							clear.	clear.
10	,043	30,018	71,5	7,4				61	70	68	,942	,896	75,5							cirri.	haze. cir
11	,070	,038	71,5	8,2				59	66		,963	,915	77,7							do	do
12	,148	,102	70,9	6,1				67	76	71	,944	,943	71,7							do	do
13	,111	,0		8,0				69	74	71	,954	,908	76,9							clear.	clear.
14	,058	,0		8,7				55	63	61	,957	,921	76,3							do	do
15	,078	,034	71,3	8,0				60	63	61	,963	,927	76,6							do	do
16	,040	,0	74,9	8,1				60	65		,938	,887	76,7							do	do
17																					
18	,088	,0		10,3				50	59	48	30,000	,951	77,2							clear.	clear.
19	,130	,0		0,4				100	51	49										do	
20	,069	,020	70,5	4,4				76	40	42	29,996	,956	73,3							do	clear,
21	,140	,121		12,3				34	42		30,018	,980	73,1							do	do
22	,098	,066	67,1	10,6				43	48		29,993	,958	73,4							do	do
23	,060	,026	67,1	9,5				49	59		,963	,908	73,9							do	clear. cirri.
24																					
25																					
26	,062	,021	65,2	6,9				64	70		,972	,921	71,7							cloudy.	cldy. haze.
27	,020			7,9				56	63		,911	,880	72,5							overcast. cl.	clear.
28	,066	,053	67,5	7,4				60	65		,906	,871	73,3							clear.	do
29	29,998	,962	67,5	6,6				64	59		,886	,847	74,3							do	do
30	,934	,911	70,5	7,9				59	70		,822	,794	76,5							do	do
Mean.	30,034	30,017	70,6	7,6				60	63	62	29,933	29,892	75,3							light airs.	clear, pleasant.

Resolved—nem. con. on the motion of Lord Bishop, that Mr. Kittoe and Mr. Lyon be appointed to the consolidated office of secretary and librarian, and museum on the consolidated salary of Rs. 200 per

In introducing the above proposition Mr. Kittoe in

views rendered by Mr. Kittoe in

Orissa or, more properly, ancient

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A letter from Captain

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Lieutenant

Mr. Lyon

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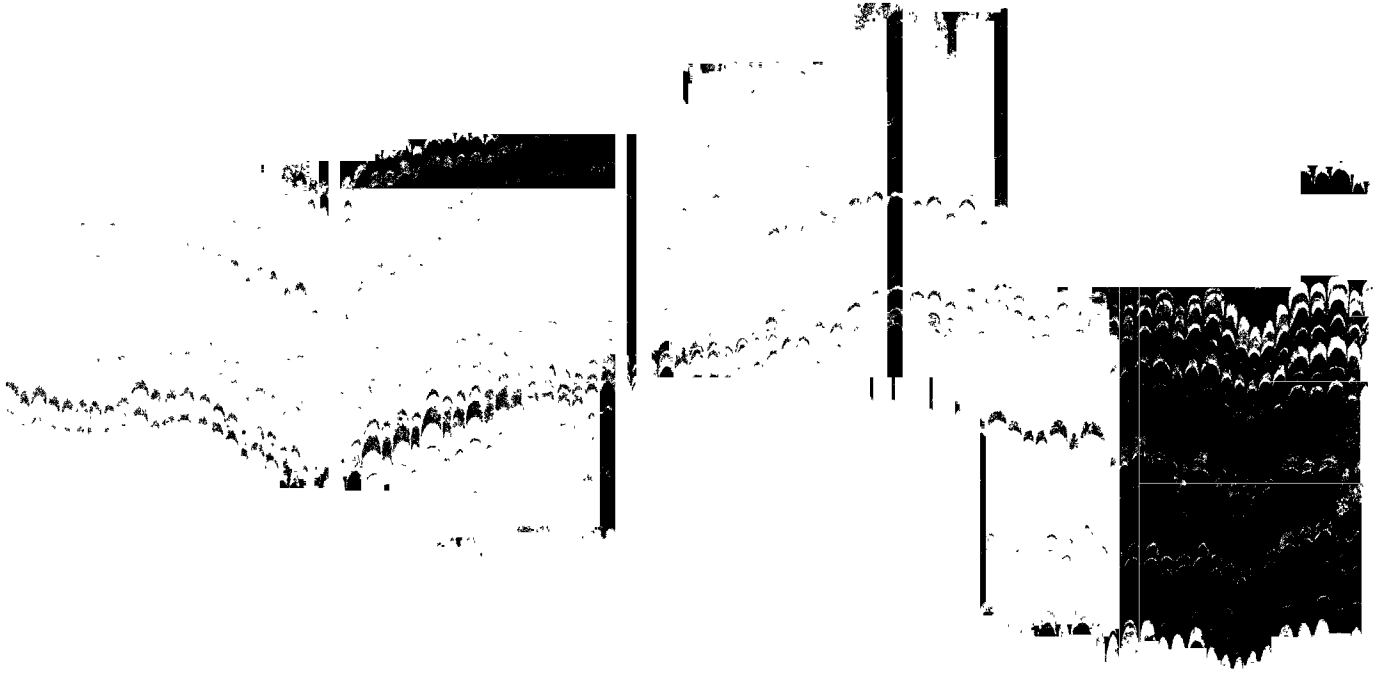
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